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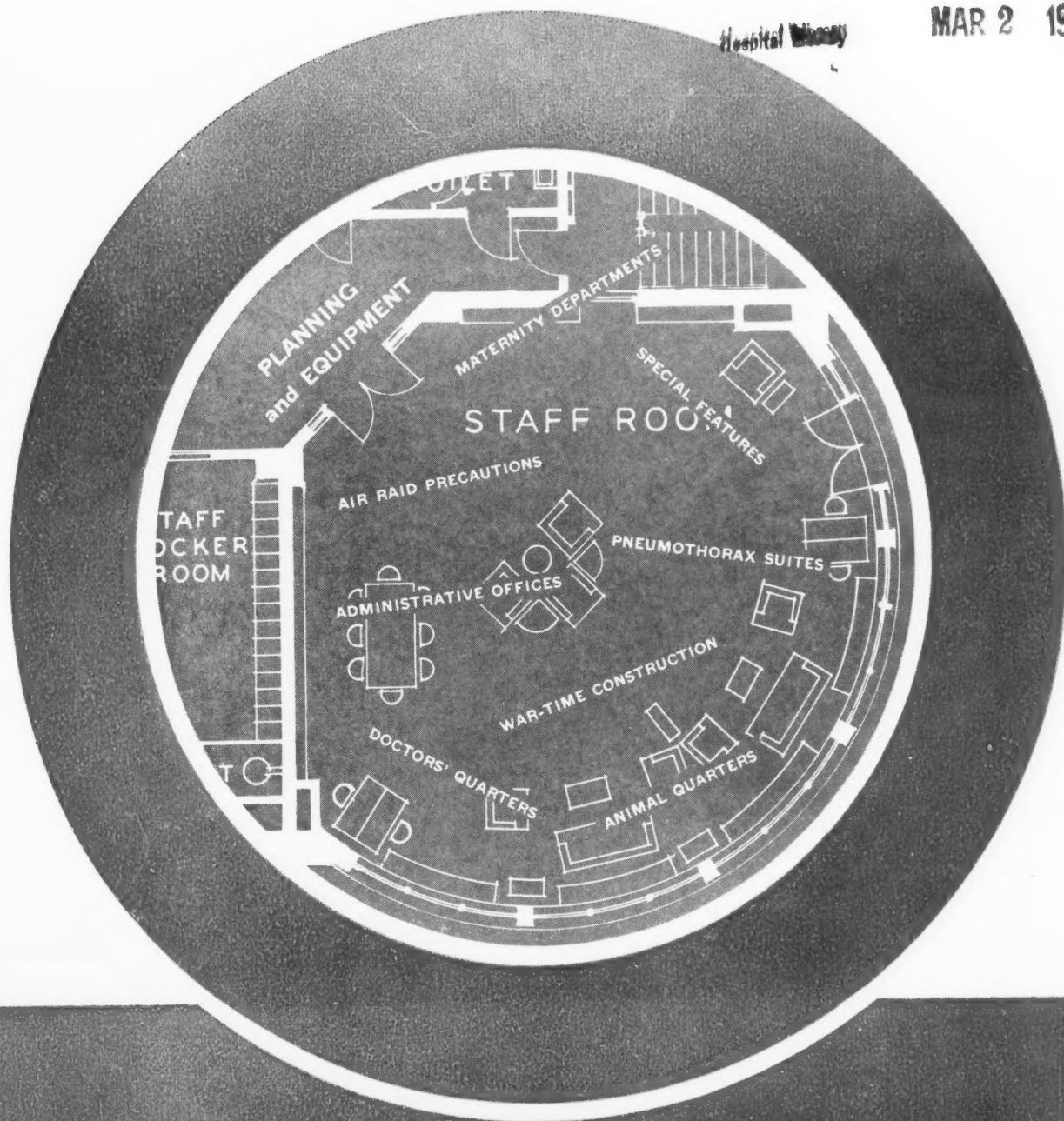
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MAR 2 1942



the MODERN HOSPITAL

VOLUME 58

MARCH 1942

NUMBER 3

A STRONG HAND PULLING WITH YOU



★ *Wartime Message to Gumpert's 50,000 Customers* ★

IN these critical days your chief concern is, where to get needed food supplies, ready to use or serve. Any one can *sell*. But what you want to know is, **WHO CAN DELIVER?** You need a strong helping hand!

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By *Don Janney*
President, *S. Gumpert Co., Inc.*

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You, who need quality food preparations that save time, money and labor—remember that you are in good hands when you are a Gumpert customer. If you are NOT a Gumpert customer, why not start being one right away?



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Just in Passing—

THE Social Security Board's proposal to offer hospitalization benefits, which is the outstanding question before hospital groups today, is dealt with at some length in this issue and will be covered more fully next month. Now is the time to take it up with your trustees and to explore the pros and cons.

HAVE you called the attention of your medical staff to the new department of "Hospital Medicine and Pharmacy"?

While this department will, of course, continue to serve administrators, as do all other departments of the magazine, it will push a little further into that vaguely defined area that is of concern to both administrative and professional groups. The new section on "Clinical Briefs," prepared by Dr. E. M. Bluestone and his colleagues, appears for the first time in this issue. This will interpret clinical advances, particularly for lay administrators.



for BETTER STAFF WORK

Your department heads need information in this issue. You can call it to their attention easily with the coupon below. Just tear it out and paste or clip to the cover of the magazine.

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WITH THE *Roving Reporter*

Delivered by Caravan

"Hallowed by the blood of martyrs," the hospitals of West China Union University at Chengtu recently received a large shipment of drugs and laboratory supplies.

How the drugs reached this medical school and its hospitals in Free China is an epic tale, a tale for Pearl Buck to tell in her next novel.

When France fell the Japanese entered Indo-China, impounding there 275 crates

jungles and over high mountain ranges by long lines of men and beasts. Enemies beset the caravan—bandits, Japanese bombers and, worst of all, malaria, for this territory is acknowledged to be one of the worst malaria regions in the world.

When Doctor Crawford also died of malaria, a new leader took charge, Mr. Sun, a Chinese staff member of the American Bible Society. Mr. Sun succeeded in getting the shipment as far as

of Chicago and described in *The Modern Hospital* of April 1937. Seven buildings are ready for use but lack the necessary equipment for immediate operation.

Several older hospitals are maintained by the college and by church groups representing four nations: China, the United States, Great Britain and Canada.

Meet Miss Richards

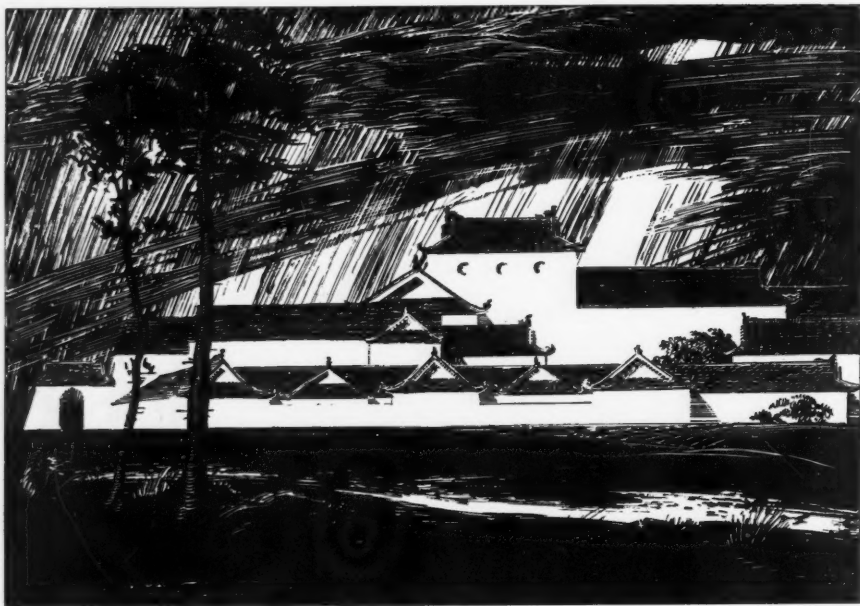
May we introduce you to Ann E. Richards, hostess at the Georgia Baptist Hospital, Atlanta. You'll be as glad to meet her as are the patients of that institution and she will be as happy to serve you as she is to wait upon them. This job is an important one in building good will. If there is any doubt about it let's spend a minute or two talking with Miss Richards and her superintendent, W. D. Barker.

Maybe the patients do not hail her visits with delight! Twice each day she brings them their mail, which is stimulating in itself. She may be asked to read a card or letter or to write an answer, even. For just such emergencies she always carries with her stamps, cards and stationery. Occasionally, someone will want to put through a long distance telephone call or to send a telegram. Miss Richards is ready and willing.

During the many months she has been lightening the burdens of both patients and nursing staff at Georgia Baptist, she has developed into a professional shopper. There is scarcely an item that she is not asked to select, ranging from the big, red Winesap apple that one elderly gentleman expressed a wish for to housecoats, slippers and other wearing apparel. She has been known even to obtain help for a patient from a local employment agency.

She will surely want to tell you about her library. Since its start, some ten months ago, it has grown to 300 volumes, the gifts of friends. It constitutes another service that every patient appreciates.

One thing she can't tell you, and that is how she serves. It is her own secret—a pleasing personality, which is so essential yet so rare. That, indeed, is why your Roving Reporter is introducing you to Miss Richards of Georgia Baptist Hospital.



A sketch of the new University Hospital at Chengtu, Free China, which will be operated in connection with the West China Union University. The difficulty of procuring equipment, illustrated by the accompanying story, prohibits the use of the seven hospital buildings now completed.

of West China Union University supplies. After long bickering with the authorities, Rev. W. R. Albertson of the university staff succeeded in getting the supplies released and on a train bound for China.

At the Yunnan border the Chinese had blown up all bridges and destroyed the railway track. The 275 crates were unloaded on the banks of the swirling tropical river. Small boats were found, coolies engaged and, finally, the precious supplies moved into Free China. However, the Rev. Mr. Albertson became seriously ill of malignant malaria and soon died.

Dr. Wallace Crawford, also of the university staff, took up the burden. He assembled a caravan of men and horses and the crates were borne through

Kunming. Of the coolies who carried the burdens over the precipitous trails, 85 had died and 120 had fallen ill by the wayside; five horses had perished on the trails.

In Kunming the 275 crates were loaded on trucks and gradually filtered north to Chungking and Chengtu. Almost a year elapsed between the departure from Indo-China and the arrival of the last truck at the medical school. In accepting them, the professor of chemistry said:

"Rarely were chemicals hallowed in this way by the blood of martyrs. It makes those of us who touch them feel humble and unworthy."

Nearing completion is the great new University Hospital at Chengtu, designed by Schmidt, Garden and Erikson



LOOKING FORWARD

The President's Proposal

PRESIDENT Roosevelt's proposal to increase social security taxes so as to provide hospitalization benefits presents the hospital field in the United States with a crucial problem.

Before discussing the issues presented, it should be pointed out that apparently there is as yet no specific proposal. The Social Security Board has not made public any outline of just what benefits it hopes to provide, to whom they would be provided, how those benefits would be paid for and what administrative machinery and regulations would be set up. In fact, both the board and the President have invited the consultation and advice of hospitals on such details.

Apparently, however, the board is determined that something must be done to provide more health service for the 35,000,000 or 40,000,000 workers now paying social security taxes and for their families. In this determination, presumably, it has the President's support, since it is in general along the lines of his program. Perhaps even the Treasury will support the move because of its anti-inflationary aspects.

The basic issue facing voluntary hospitals and Blue Cross plans is whether they shall attempt to go along with this general program, admitting that the federal government has a proper rôle in the provision of hospital service on this large scale and trying to help work out the best possible plan, or whether they will fight the proposal wholeheartedly on the ground that the assumption of such large responsibility by the federal government will mean the ultimate extinction of the voluntary hospital in America.

Several keen observers who are distinguished leaders in the hospital field are convinced that some such program is inevitable. They point out that it is in accord with the trend of the times and with the whole fabric of recent social legislation in this country and with general legislative and social trends abroad. They believe that the program can be guided in such a way that it will not seriously interfere with the freedom and local control of either voluntary hospitals or Blue Cross plans. They point to the great increase in sales of commercial life and annuity insurance following the

enactment of the Social Security Act and predict a similar rapid growth of Blue Cross plans following passage of some such legislation as the President has proposed.

Because these people believe in the inevitability of some such form of legislation, they deem it both expedient and essential to cooperate effectively with the Social Security Board in working out the details so that the plan enacted will be administratively sound and so that it will interfere as little as possible with the initiative, freedom and local control of voluntary hospitals.

Another group of equally able and observing hospital administrators is convinced that the legislation, if enacted, will result in the gradual, if not the sudden, demise of the voluntary hospital system in the United States. These men consider this a first step in the development of a medical and hospital service dominated and controlled in full by the federal government. They think such a plan would dry up the present financial support of hospitals at its source, would not give the workers their money's worth, would impose a rigid system on a national basis that is not adapted to local needs and would freeze this system and tend to discourage all significant experimentation and progress.

Many believe that private initiative, as expressed so effectively through the voluntary hospital and the Blue Cross plans, is essential to the preservation of the American tradition, in contrast to the regimented "new social order" of the countries with which we are now at war. These men subscribe to the injunction that "a nation loses if the sense of social responsibility of its citizens is confined to the payment of taxes and their social conscience expressed, in the main, by proxy through federal agents." They say that the Social Security Board, which has done so much for the workers of this country, would seriously mar its own record by sponsoring a poorly thought-through plan. Most particularly, they believe that the hospitals of the country are able and willing to cooperate in providing low cost plans that will reach a majority of the employed workers in the reasonably near future.

The appointment of a committee to consult with the federal officials and the instruction of this committee

to stand firmly for the preservation of the independence and local control of American voluntary hospitals were logical steps for the American Hospital Association to take. But the A.H.A. committee should not be expected to shoulder the whole load. This question is so important that every hospital administrator, trustee and medical staff member should give it thoughtful and conscientious attention. The opinion of the hospital group should then be communicated to the A.H.A. committee.

Business Management

THE 1942 edition of *The Hospital Yearbook*, published last month, has an extensive section on business management in the hospital. Business management is discussed in general and in its application to various departments and activities. A wealth of suggestions for specific methods of improving the hospital's financial situation, as well as its efficiency, will be found in the new edition.

Another substantial section of the editorial part of the book contains reference data of value to hospital administrators, architects, nurses, dietitians, housekeepers, engineers and others. It is carefully arranged and is fully indexed to facilitate use by the busy executive.

The Yearbook contains, of course, the complete buying guide for administrators and purchasing agents and an excellent assortment of catalogs and advertising of the principal firms serving the hospital field. The advertisements and catalogs alone provide a great wealth of reference and educational data that any alert executive is glad to have at his elbow.

Who's to Pay the Piper?

A RECENT survey of the amounts paid by states, counties and towns for the hospitalization of indigent patients reveals some surprising figures. According to this survey there are still nine states that pay nothing to voluntary hospitals for the care of indigent patients. There are 17 additional states that, at the maximum, pay \$3 per day or less, some of the figures being \$2, \$2.50, \$1.14 and \$2.15. The figures on cities and counties are not so easily tabulated, but many low amounts are reported. In a few rare instances, it may be that both state and local payments are made for the same patient.

Anyone familiar with hospitals knows that adequate modern hospital care cannot be rendered at such low costs. Either patients will not get the type of treatment they should have or employees will be underpaid or overworked. Few hospitals have sufficient free income from endowments, gifts, community fund allotments or other sources to enable them to make up all of this difference. Without necessarily demanding that

the government meet the cost of caring for the indigent down to the last penny, it is clear that in many areas the payments from the government are entirely too small.

All of this was true last year and the year before, in spite of the fine work done by the joint committee of the A. H. A. and the American Public Welfare Association to bring about a better partnership between local governments and voluntary hospitals.

Today the situation is growing acute. Wages and prices of commodities have stepped up sharply. Even if there is no further advance, the financial position of many hospitals is dangerous. They cannot keep competent employees at present rates of pay. Part of the increase can be passed along to paying patients. Part can be met by intelligent economies, as suggested by Taylor and Geis in the January issue. Still another part of it, however, should be met by local and state governments which use voluntary hospitals to care for their wards. Insurance patients should pay full cost with rates advancing as costs rise.

Certainly the size of the burden has grown too great for us to expect that it can be met merely by payroll economies made at the expense of loyal and devoted hospital employees.

Appeal to the Keen Minded

IN THESE days of increased personal initiative, it might not be amiss to remind hospital people of The Modern Hospital Gold Medal and Award offered each year. While eight months of the current award year have gone by (the award is based on material published from July of one year through the June issue of the next year), there remains time for good articles to be written, accepted and published for consideration in this year's contest.

Like the school boy's English theme, the best articles are usually the ones that grow right out of the author's own experience. By listing a few subjects, however, someone may be stimulated to report something that has been lying unnoticed right under his nose. We suggest to administrators and department heads the following topics:

"How to Economize Without Cutting Essential Services," "Improved Technics for the Admitting Department," "Postwar Planning for American Hospitals," "Maintaining Employee Esprit de Corps During the War," "Successful Fund Raising Under Present Conditions," "Arousing Community Support for Convalescent Care," "Recreation for Employees," "Aptitude Tests for Employment" and "Ways to Meet the Intern Shortage."

Full details regarding the contest are to be found in *The Modern Hospital* for October 1940, facing page 64. This is an opportunity for keen-minded young administrators or department heads to obtain merited national recognition.

Vital Hospitals Can Be Built

RUTH HILL ZIMMERMAN

Washington Representative, The MODERN HOSPITAL

SCARCE materials will be available for hospital construction projects for the "duration" only in minimal amounts and only for projects regarded as vitally needed, according to policies established by the War Production Board and the Federal Works Agency. The two agencies agree on these two points but differ on the extent to which architects and contractors must simplify their plans to meet restrictions on the use of materials needed for war production.

Donald M. Nelson, chairman of the War Production Board, has announced a program greatly increasing the emphasis on war production, but he has reiterated recognition of the necessity of protecting the health and welfare of the civilian population. The reorganization that has occurred since the establishment of the War Production Board late in January has changed the procedure of handling the granting of priorities for hospital projects but does not appear to have affected policy greatly. Hospitals, compared to other civilian activities, still enjoy a somewhat favored position.

Two steps which were contemplated in February within the War Production Board may, but probably will not, change the picture. The first of these was the proposed appointment of a director of all construction and the second was the issuance of a construction limitation order.

The Federal Works Agency policy, which will affect only those hospital construction projects applying for financial aid under the Defense Public Works program, is more drastic than the War Production Board policy. The new basic construction policy of the Federal Works Agency, described in a surprise announcement issued on February 16 by Acting Administrator Baird Snyder III for Administrator Philip B. Fleming, limits buildings constructed under the Defense Public Works program to one and two story masonry or

wooden structures using virtually no materials on the critical list.

Even projects that have been approved but are not yet under contract will have to be restyled to conform with the basic unit plan. Details of replanning of projects had not been worked out by February 16 but it is assumed that the regional offices of the agency will call back the individual projects and aid in adapting the plans.

While wooden structures will be recommended for some schools and other buildings in areas not likely to be subjected to enemy action, the

Compared to other civilian activities, hospitals still enjoy a favored position in the priorities picture

masonry buildings will be generally recommended for the hospital projects, the representative of The MODERN HOSPITAL was told. These masonry structures will be fireproof and bomb-resistant, the Federal Works Agency said.

Specifications worked out by the engineers of the Federal Works Agency call for a basic masonry unit with concrete foundation and floor set over a gravel fill. Sixteen inch concrete pillars will support a concrete roof. The walls may be of concrete, cinder block or brick. Windows will be of wood, set flush with the outside of the wall. In the two story buildings, concrete stairs or ramps will connect the floors. These will not be wall-bearing structures. Standard widths up to 58 feet and variable lengths make it possible to arrange basic units like dominoes so as to provide the amount of space needed. While the applicant will determine the details of interior arrangement, according to Mr. Snyder's announcement, a center-corridor plan will be followed along the lines

of the pillars, which will be spaced more closely in hospitals and health centers than in schools.

In announcing the new policy, Mr. Snyder gave two reasons for limiting the height of Defense Public Works buildings to two stories. First, he said, motor-driven elevators are "out" for the duration of the war. For another, taller structures would require steel framework. Buildings of the type specified, according to the announcement, will meet the needs of war time and can be converted effectively to peace time uses later. Substitution of such structures for usual types will release critical materials for guns, tanks, ships and munitions.

Apparently, the action of the Federal Works Agency resulted from information that many of the projects approved since last August, when the program got under way, are not being completed. In some cases, great difficulty has been experienced in obtaining materials and especially such necessary equipment as elevators. The A-6 priority rating, most frequently assigned to hospital projects coming under the Defense Public Works program, it was indicated, is too low to ensure prompt deliveries. In mid-February, the Federal Works Agency did not have available an estimate of the percentage of projects that have been delayed or even a report on those that have been completed although it was said that such a report was in preparation.

District of Columbia hospitals are among the first to which the two story pavilion structures with ramps have been recommended. Eleven Washington hospitals plan applications for additions as soon as funds are available. (The Lanham bill to provide \$50,000,000 for housing and defense public works projects in the District of Columbia has been passed by the House of Representatives and was scheduled for consideration by the Senate Education and Labor Committee on February 17.) It is estimated that the District of Columbia additions and annexes, following the Federal Works Agency specifica-

tions, could be erected at a cost of \$4000 per bed. A total of 750 additional beds has been suggested but the 11 hospitals hope to provide 867 additional beds.

The War Production Board, which must review the Defense Public Works program hospital projects if they desire priority ratings, was not inclined to view the Federal Works Agency new construction plans with favor. The Industrial Machinery Branch denied that it had become impossible for hospital projects to get elevator machinery and one of the engineers who has responsibility for reviewing nongovernmental hospital construction for priority ratings indicated a doubt concerning the saving of critical materials to be effected by use of the two story buildings with ramps instead of the usual elevator service.

Private Funds Must Be Raised

Before going on with a description of the War Production Board procedure and policy on hospital projects, it may be of interest to mention another cause of the delay in the erection of hospital projects under the Defense Public Works program. This lies in the failure to raise the private or community funds needed for projects that are only partially financed by the federal government. A statement on this subject, recently issued by Acting Federal Works Administrator Baird Snyder III, urged hospitals who are applying for aid to go ahead with their own financing programs.

Mr. Snyder pointed out that many hospitals that are applying for aid cannot be included in the program and warned that, other things being equal, the chances of approval would be increased if the hospitals would arrange their share of the financing arrangements in advance of their applications. Mr. Snyder reported that, in addition to the projects already approved, applications have been filed for additional projects with a total estimated cost of more than \$155,000,000. Under the recent appropriation act, only \$150,000,000 was made available for federal aid to all types of Defense Public Works projects.

Consideration of applications for priority ratings for hospital projects is now divided between two branches of the War Production Board. Non-

governmental hospitals file their applications with the Health Supplies Branch, of which William Bristol is chief. William J. McManus is chief of the project section in charge of hospital and health supplies industries construction. All governmental hospital applications are referred to the Governmental Requirements Branch, of which Maury Maverick is chief. Frank V. Maxton handles the governmental hospital applications.

Both branches require the filing of four copies of an application for project rating (PD 200). This calls for a complete description of the project and a detailed list of the critical materials needed for its completion. This description is examined minutely by the engineers, who perform what they refer to as a "strip-tease," removing from the plans all nonessential uses of materials on the critical list. Out of their experience, they are able to suggest substitutions and, in some cases, changes in design that will save steel, iron, copper, lead, tin and the other scarce materials. The applications are also referred to the so-called commodity branches for their approval.

Along with the stripping of non-essential critical materials from the plans goes consideration of the importance of the need to be met by construction of each project. Applications handled by both branches are referred to Dr. James A. Crabtree, executive secretary of the health and medical committee of the Defense Health and Welfare Services, who passes on the health need.

Information that the applicants are required to furnish for Doctor Crabtree's use includes: (1) a general description of the hospital; (2) a statement as to the number of beds and the percentage of occupancy by months during the preceding six months, as well as an estimate of the total number of beds of similar character available within the hospital "trade area"; (3) whether or not the hospital has a nursing school and whether the proposed expansion contemplates an increased enrollment of student nurses; (4) a statement concerning any increase in population within the hospital "trade area" since 1940, and (5) other similar details, especially if the necessity for the proposed expansion arises out of a specific national defense activity.

Projects designed primarily to increase the comfort or efficiency of the staff are deemed less necessary than those that will supply additional hospital beds. Provision for training additional student nurses is also given favorable consideration in establishing the particular rating given a project. Defense areas are not necessarily favored at the expense of other areas where the need for additional facilities is great.

Such projects as those included in the Defense Public Works program (which have already been passed upon by the U. S. Public Health Service as being essential) and those presented by the Veterans Bureau, which is making careful preparation to meet the needs arising out of the great increase in the size of the armed forces, are given prompt approval by Doctor Crabtree. Other projects, not previously subjected to a similar check, are evidently given more careful scrutiny.

The final step in obtaining a priority rating for a particular project is consideration by the review and approval branch of the Bureau of Priorities. C. H. Mattieson is chief of the bureau and S. L. Phraner is chief of the approval branch.

Effect of Rating Is Variable

Considerable variation in the effectiveness of a particular rating is experienced in different parts of the country. In some areas, the flow of materials may be sufficient to provide prompt deliveries with relatively low ratings while in others, where demand may have been sharper, materials may be scarce.

If a project is stopped midway by lack of some particular commodity, the applicant may return to the War Production Board with a PD 1 A application for a higher rating in order to obtain the needed material. The PD 1 A should be directed to the health supplies branch in the case of nongovernmental projects and to the governmental requirements branch in the case of governmental hospitals.

These applications should be accompanied by the original letters and orders to support the statement that real effort to obtain the materials has met with failure; moreover, an indication should be given as to the rating required to secure the materials needed.



View of the attractive entrance lobby of Mason County Hospital, Ludington, Mich., an institution recently enlarged so as to accommodate 46 patients.

Administrative Offices

H. ELDRIDGE HANNAFORD

Samuel Hannaford & Sons, Architects, Cincinnati

TOO often the administration section has been assigned what's left of the space in the general plan. The pity of it is that such a mistake, once made, is difficult to rectify. Expansion of administration facilities should be foreseen and adequate provisions made therefor.

Many factors influence the proper planning of this important department. Some of them are: (a) size of institution; (b) possible growth and diversification of services; (c) geographical location and customs, particularly as regards race separation, and (d) the general administrative program, which should be, but often is not, set up coincidentally with the general building program.

The administrative department, as the name implies, is that portion of

the hospital plant concerning itself purely with the government and operation of the hospital and with the maintenance of proper and cordial relations with the public. This is a loose definition but it may serve as a basis for the point of view expressed in this article.

In larger institutions the administrative functions are often housed in a separate building or in a semi-detached wing. In smaller plants they are usually grouped on the main floor in close proximity to the main entrance. Regardless of the size of the hospital, the general business and executive branches of administration should be so placed as to become the public's first point of contact.

Nothing contributes more toward making a bad first impression than a

small, poorly furnished entrance lobby and main waiting room. Here is the place to "put a little extra something on the ball," to spend a bit more for purely esthetic results.

The main waiting room should be radiant with hospitality and comfort. Lounges and easy chairs should be plentiful and should be arranged in intimate groups. The main information desk or receptionist's station should be so located as to be a focal point for the visitor the moment he enters.

Here are some other "musts": Provide one or two small private waiting rooms or alcoves for the use of those who wish to withdraw from the others and be alone.

Provide a separate waiting room for colored people when local custom

requires. This room should have access apart from the main entrance.

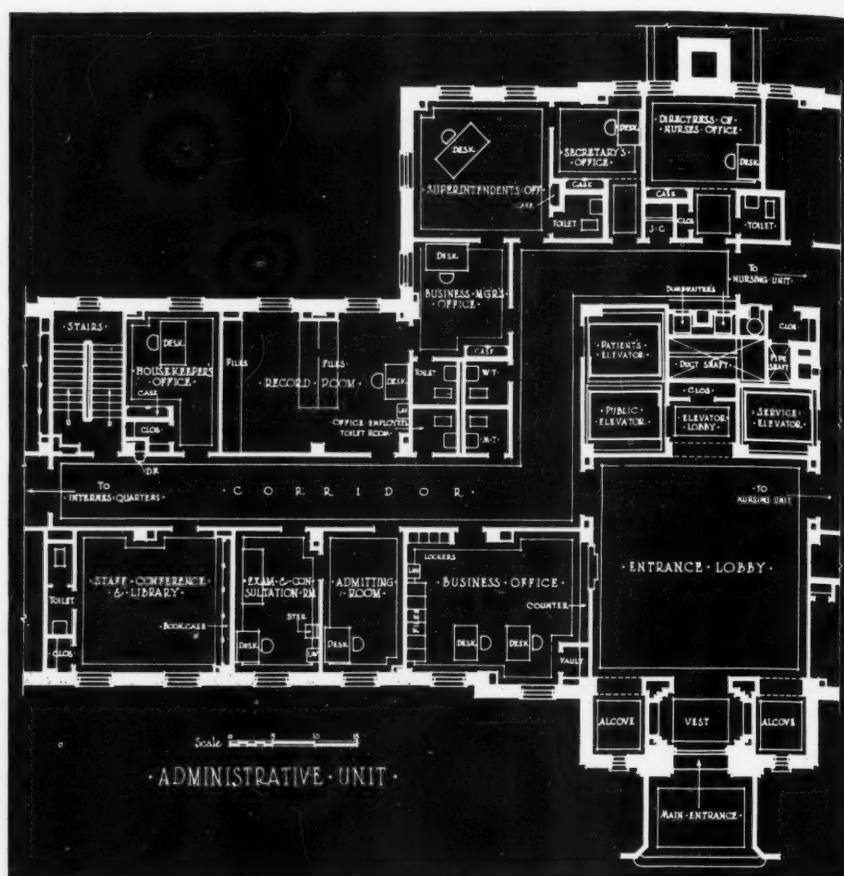
Directly connected with the public waiting spaces and as nearly as possible in a direct line of travel with the main entrance, locate the public elevators. This obvious fact can be easily overlooked.

Near the elevators and waiting rooms, locate the public toilet facilities.

The general business office should open onto the main waiting room. The opening need not be a door but may be an open counter somewhat similar to the hotel room clerk's desk or cashier's window. Here persons can transact routine business without entering any other part of the hospital unless they have some special need to do so.

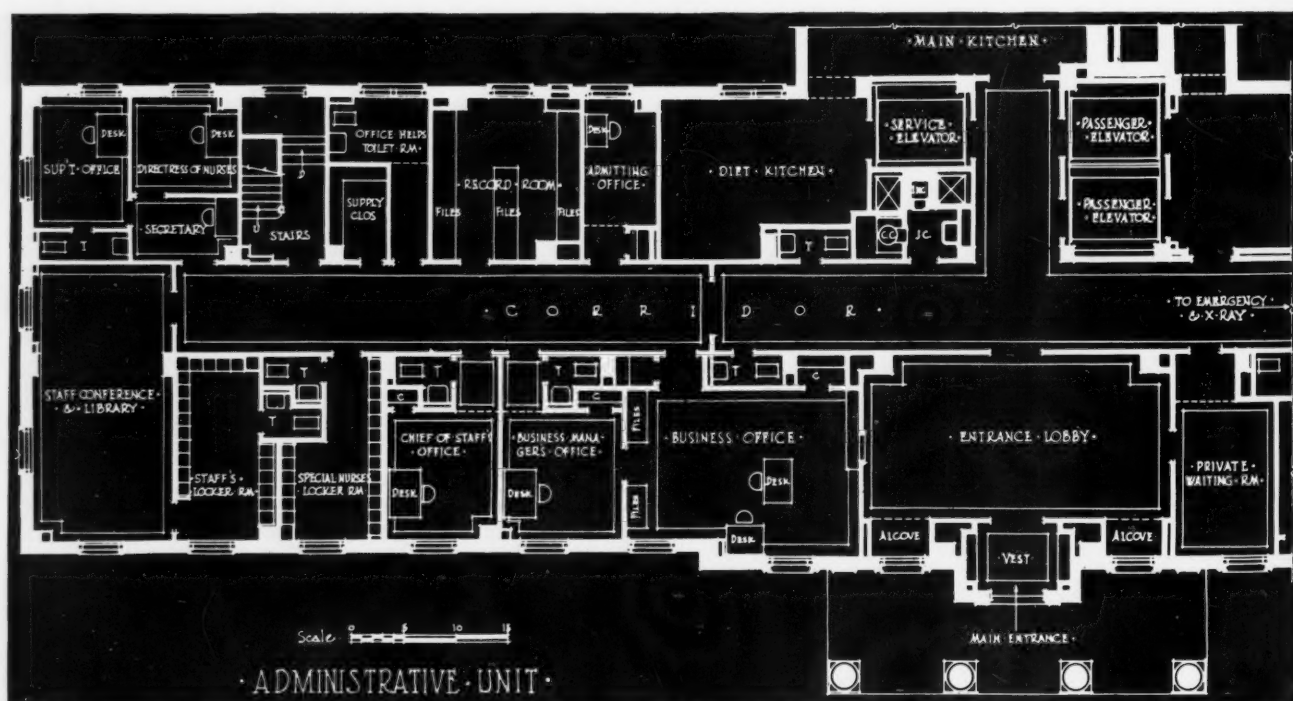
Directly connected with the business office and controlling it, locate the private office of the business manager. This office should also be accessible from the public corridor so that those having business with the manager can reach him without going through the general business office. When an assistant is required, the offices may be arranged en suite, with a small waiting area and secretary's room worked in as a part of the setup.

Near the business office, possibly across the corridor, establish the central record room; here is where generosity is not only a virtue but a



vital necessity. Unless microfilm is used, the space required for record storage becomes truly bewildering; so just double the area you thought sufficient when making this space assignment and—in later years—you will undoubtedly be accorded all the honor of a far-sighted genius.

Convenient to the main waiting room, provide one or two small rooms to serve as admitting offices for incoming ambulant patients. If these can be located near the business office and the record room as well as the main waiting room or lounge the results are so much the better.



The administrator of the hospital and such assistants as the size of the hospital warrants should be separated from immediate contact with the public; however, these offices should be located so as to be easily reached by those who have business with the administrator without their having to pass through any part of the hospital other than the administrative section. A similar arrangement of offices, using larger units, to that above described for the business manager will probably suffice.

Near the administrator's offices, adjoining them if possible, locate the offices of the director of nursing and

her assistants. These units need not be larger than 10 or 12 by 16 feet in size. Sometimes the office of the nursing school is included as a part of this suite, but this is not usual, as it is better located in the nurses' home.

Because of their close association in the management of the hospital, the chief of staff's office should be near that of the administrator so as to encourage frequent conferences about the institution's affairs.

In the same general area, locate staff lockers and washrooms, also provide a general assembly room, which can also serve as a library and

lounge in which staff meetings may be held. This room should be of sufficient size to accommodate the entire staff and on occasions to serve as a meeting place for the county medical society or some similar organization.

Some hospitals also provide a separate meeting room for the board of trustees, but as a rule the board can use the staff assembly room for its periodic meetings.

In addition to the locker and toilet facilities for the medical and surgical staff, ample provisions should be made for the office personnel working in the administrative section; these accommodations should be central to the areas served.

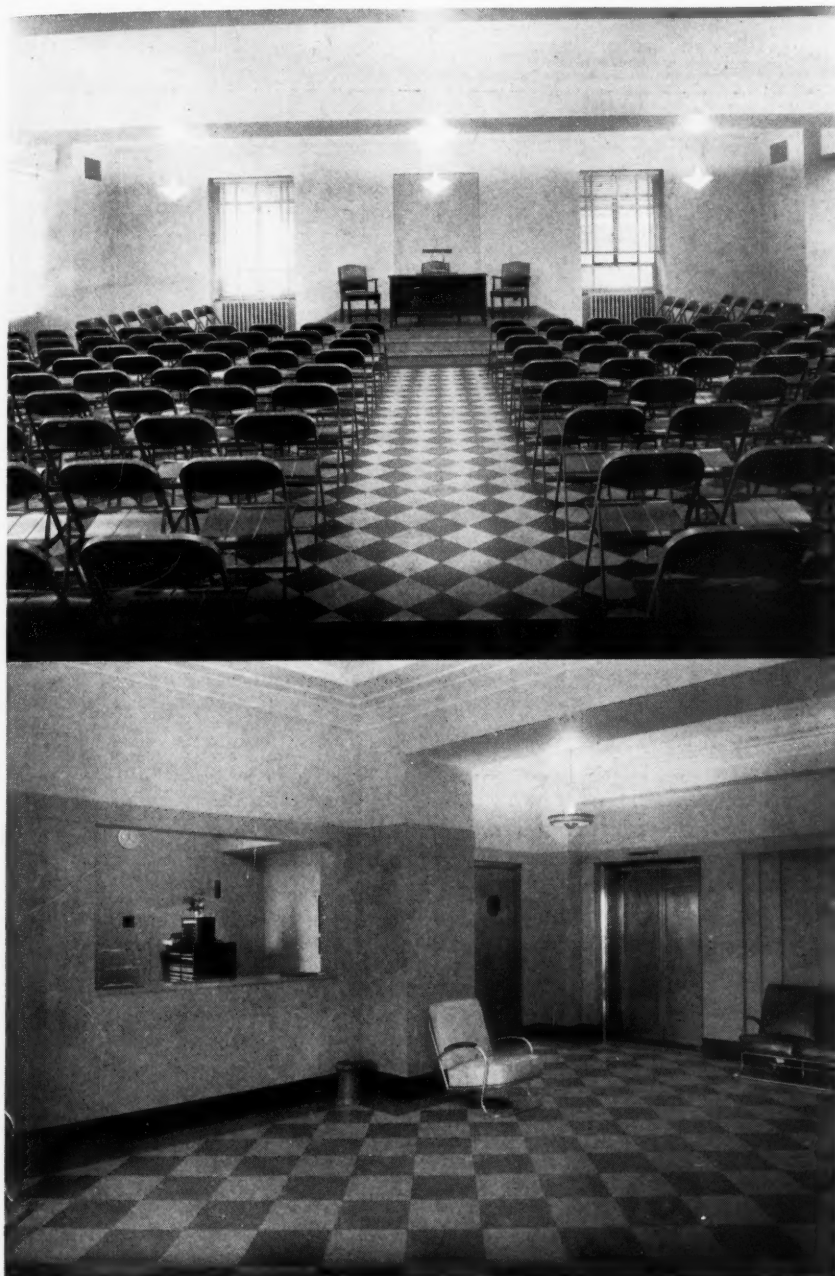
Other units often included in the administrative section are: (a) lockers and toilet rooms for special nurses; (b) housekeeper's office, and (c) central telephone switchboard. These units need not be a part of the administrative section insofar as being within the administrative area is concerned; their location in the plan becomes more or less optional.

When space permits, it is good policy to establish a small shop for the sale of flowers, candy and small gifts, so that the visitor may do last minute shopping. Such a gift unit should logically be a part of the main entrance lobby and waiting room so as to catch the visitor's eye at once upon entry.

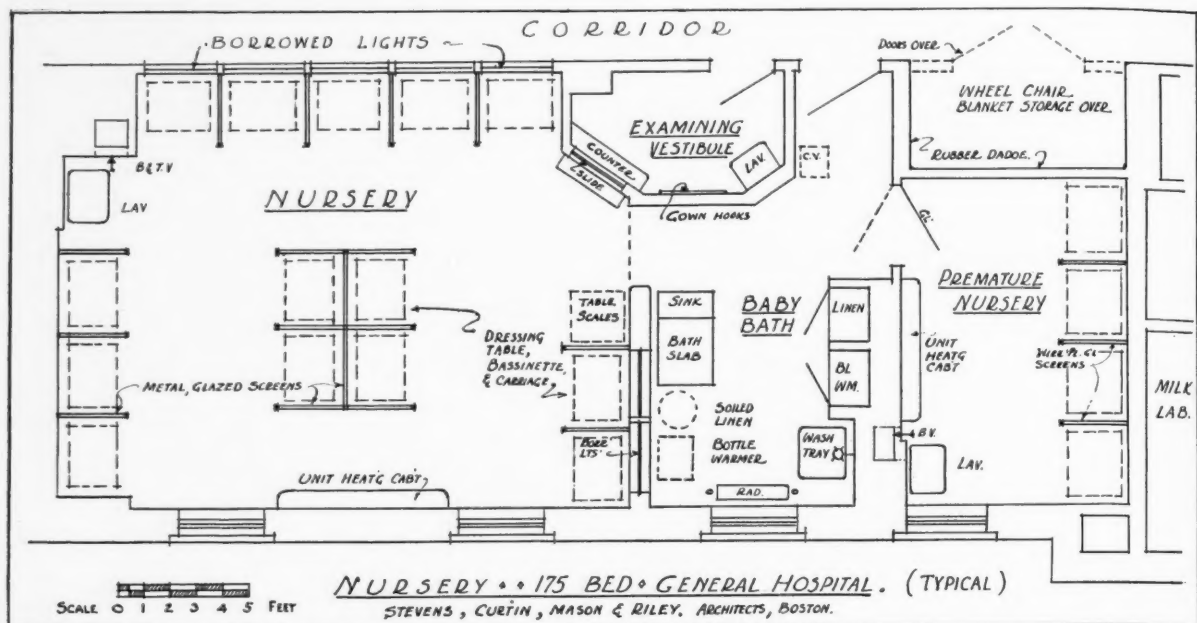
Other items that must not be overlooked are: (a) public pay telephones off main waiting room; (b) a vault in business office and office supply closets near by; (c) coat closets for all private offices; (d) private toilets for the principal executives, and (e) service units, such as janitors' closets.

There are few hard and fast rules governing the planning of the administrative section but don't forget this one: *Don't underrate the importance of this department when making area assignments.* You may think it all right to cramp this area but if you do it will "come back to haunt you" in the end.

As for any other rules, we can only advise that the interested parties get together early in the project's formative stages and cooperate intelligently to the end that a smoothly planned, efficient setup, especially tailored to the particular institution, will result.



Conference room and entrance lobby of Municipal Hospital, Pittsburgh.



Maternity Departments

WILLIAM A. RILEY

Stevens, Curtin, Mason & Riley
Architects and Consultants, Boston

LOCATION of the maternity department should be the first consideration in planning. Good hospital practice recognizes the possibility of infection from other types of patients. It also appreciates the fact that other departments are often disturbed by noises from the delivery suite and nurseries.

With these thoughts in mind, the architect should plan the maternity department so that it is completely segregated, either in a separate pavilion or on a separate floor. There should also be provided separate personnel, sterilizing equipment and supplies.

Maternity service should be in close proximity to such adjunct facilities as the x-ray department and the laboratories. In large hospitals it must be closely linked with prenatal and postnatal clinics.

Usually the following areas are to be considered in the planning of the obstetrical department of a general hospital: (1) prenatal section, (2) delivery suite, (3) nursery departments, (4) isolation facilities and (5) puerperal or after-confinement department. Good design will recognize the placing of these areas in proper sequence and in size adequate to carry the peak loads of the department.

Important elements of the maternity department in the average general hospital are as follows:

Preparation or Admitting: A room sufficient in size to include shower compartment, toilet, lavatory, sterilizer, examining table, preparation tray, wardrobe and space for a record chart. It should be adjacent or in close proximity to the labor rooms.

Labor or Predelivery Rooms: Whether designed for one or more patients, there should be such accommodations as toilet, lavatory, wardrobe and the ordinary furniture, such as bed, bedside table, chairs and foot stool. This room should be preferably interconnecting with or in close proximity to the delivery room.

Delivery or Birth Rooms: One or several, depending upon the estimated number of yearly births. Delivery rooms should be large enough to accommodate only one patient at a time and the necessary operating equipment. Every provision must be made for maintaining an aseptic technic comparable to that of the operating room. It is preferable to have a delivery room for cesarean section in the maternity department rather than to depend upon the use of the operating department.

A nurses' workroom and sterilizing room should be near the delivery

room; when there are two delivery rooms it is best situated between the delivery rooms.

Nurseries: The architecture of obstetrical nurseries can be improved upon in many hospitals. Hospitals have a responsibility to protect infants from infections. State boards of health and local ordinances do their share in demanding that adequate care be maintained but this is not enough.

General hospitals may provide a general nursery, a nursery for private patients, nurseries for ward cases, a premature nursery and isolation nurseries. Location should central on the obstetrical floor. The unit usually consists of examining room, preparation or bathing room and the nursery.

If the nursery suite is properly planned there will be little danger of anyone entering it except the nurses caring for the babies. Even the doctors will want the babies brought to the examining room where aseptic technic may be maintained.

Nurseries may well have a cubicle arrangement with glazed partitions separating each bassinet; this permits individual care and reduces the danger of cross-infections. Cubicle arrangement requires slightly more floor space than the arrangement

wherein infants are placed in bassinets on racks.

Premature and isolation nurseries are important elements of the nursing service. The use of vestibules or subcorridors will afford the privacy and special care so necessary for these nurseries.

Milk formula rooms, except in the very large hospitals, are usually located in the obstetrical department under the supervision of the nursing department.

Isolation Departments: Provision for a complete isolation department is important for such cases as develop fever or other evidences of infection. This isolation unit should be segregated from the rest of the department and be a self-contained hospital unit.

Approximately one bed for each 20 or 25 obstetrical beds is the usual requirement. The suite will contain patient rooms, serving room, utility room, nurses' station, the cubicled isolation nursery and baths.

Patient Accommodations: The ratio of private and semiprivate beds may be slightly higher in the maternity department than in other departments because of anticipated hospitalization and income. There is a preference for shower baths rather than tubs, although neither are used much. The private rooms may be a little more luxurious than in other departments; each hospital wants something a little smarter than its neighbor. Washable wallpaper may be more economical than painted walls; good furniture and draperies will tend to bring the home touch to the hospital.

Special Features: The complete obstetrical department will contain, in addition to the foregoing, some or all of the following facilities: doctors' lounge and locker room, nurses' and special nurses' locker rooms, floor laboratories for urinary and blood examinations, obstetricians' office, space for patients' clinical records, waiting rooms, fathers' room, ample stretcher space and facilities for supply and blanket storage.

If hospitals are to provide safe and practical maternal care for their communities it is necessary to plan adequate nursing units with all the modern equipment and architectural details required by the obstetricians and nursing staffs. Some trustees do not

appreciate the real significance of providing for complete segregation of the department and for the possibility of future expansion.

Because of their nature and requirements, obstetrical departments are more expensive to build and maintain than are some of the other departments. On the other hand, the income from the maternity department often carries part of the operating costs of other departments.

Recent advances in the mechanical sciences have brought about improvements in plumbing, heating, ventilating, electrical and sterilizing equipment. With respect to electrical equipment more attention is being

given to those factors that will prevent explosion in all operating areas. The usage of new anesthetic agents necessitates the control of electric spark conductivity. One of the methods used to minimize this danger is to provide brass dividing strips inserted in the paved floor not over 6 inches on center and electrically grounded. Another is to provide electrically conductive rubber flooring with non-static rubber protected equipment and clothing for the personnel.

Many doctors have claimed a reduction in secondary infections with the introduction of ultraviolet lights, or so-called sterilamps. A reduction in air-borne infection through meth-

~SPACE REQUIREMENTS OF DELIVERY SUITE & NURSERIES~AREAS IN SQ FT~

COMPILED BY WILLIAM A. RILEY.

• SPACE •	125 BED HOSPITAL	175 BED HOSPITAL	225 BED HOSPITAL	250 BED HOSPITAL	500 BED HOSPITAL	NOTES & EQUIPMENT.
PREPARATION RM	10x12 120	8x16 128	9x16 144	11x16 176	10x17 170	SHOWER, TOILET, LAVATORY, EXAMINING TABLE, CABINET.
LABOR RM	9x12 108 ₂	9x16 144 ₂	14x14 [*] 196 ₂	12x16 [*] 192 ₂	9x16 144 ₂	* TWO BED ROOMS AIR CONDITIONING. † PLUS 1-4 BED LABOR RM
DELIVERY RM.	14x16 224 ₂	14x17 238 ₂	16x16 256 ₂	16x16 256 ₂	14x16 224 ₃	LOWER NUMBER INDICATES NO. OF DELIVERY RMs IN THE SUITE. SEE BELOW FOR OPERATING DELIVERY.
OPERATIVE DELIVERY.	16x16 256 ₀	14x15 210 ₀	16x16 256 ₁	16x16 256 ₁	16x17 272 ₁	SIMILAR TO OPERATING RM. OPERATING RM EQUIPMENT.
NURSES WORK & STERILIZING-RM.	8x15 120 ₊	9x17 153 ₊	17x16 272 ₊	16x18 288 ₊	16x16 256 ₊	INST' STERILIZER, UTEN STER. SINK & DRBD, STORAGE CABT, WORK TABLE, AUTOCLAVE, BLANKET WARMER, ETC.
STAFF LOCKER	10x14 140	12x16 192	25x15 375	20x16 320	24x15 360	LOCKERS, SHOWER, TOILET, LAV CHAIRS, COUCH, ETC.
NURSES' LOCKER	8x14 112	8x16 128	8x16 128	8x16 128	8x17 136	LOCKERS, TOILET, LAVATORY CHAIRS, ETC.
NURSERY-GEN'	20x14 280	22x16 352	23x16 368	24x16 384	28x16 448	LAVATORY IN NURSERY. ALL CUBICLED-METAL PARTITIONS WIRE PLATE GLASS.
NURSERY-ISOL'	8x14 112	8x9 72	12x16 192	8x16 128	7x10 70	GLAZED CUBICLES SIMILAR TO ABOVE.
NURSERY-PREM'	9x14 126	9x13 117	11x16 176	8x16 128	10x15 150	GLAZED CUBICLES. APPROX SIZE 3'2" x 2'8"
INFANTS' BATH	8x10 80	10x11 110	9x11 99	9x10 90	10x11 110	SLAB BATH, TABLE, SLOPSINK, BLANKET & LINEN CABTS, SOILED LINEN HAMPER, BOTTLE WARMER.
FORMULA RM.	10x14 140	8x9 72	12x16 192	12x16 192	14x18 252 ₀	BOTTLE PASTEURIZER, SINK & DRBD, REFRIGERATOR, STORAGE CABT, HOT PLATE, ETC.
STAFF OFFICE			10x16 160	11x14 156		
STORAGE SPACE	8x9 72	8x12 96	7x16 112	8x16 128	10x14 140	BLANKET STORAGE, SUPPLIES, STRETCHER SPACE, ETC.
MAIDS CLOSET	3x4 12	4x5 20	4x5 20	6x6 39	4x4 16	SLOP SINK, MOP CLEANER, SHELF, ETC.
TOTAL AREAS OF DELIVERY & NURSERY SUITE IN 30 FEET.	2200	2358	3300	3427	3500	TOTAL NO OF LABOR AND DELIVERY RMs ARE INCLUDED IN TOTAL AREAS.

NOTES. + CENTRAL STERILIZING & SUPPLY ROOM USED IN CONJUNCTION WITH NURSES WORK & STERILIZING RM.

⊕ FORMULA ROOM NOT IN MATERNITY DEPT

◇ DELIVERY OPERATIVE CASES PERFORMED OUTSIDE DELIVERY SUITE
GENERAL NURSERY CONSISTING OF EXAMINING VESTIBULE, BABY WASH ROOM, ETC., APART FROM DELIVERY SUITE.



The ratio of private and semiprivate beds may be slightly higher in the maternity than in other departments because of anticipated hospitalization and income. Photograph at left by Russell T. Sanford, staff photographer; below, by William M. Rittase.



ods of air sterilization should receive consideration. However, at the present, ultraviolet disinfection for operating rooms is a luxury and should be limited to doctors who understand the biophysics involved and the protection needed for the skin and hands.

Fluorescent lighting is coming more into hospital use. There are some definite advantages in economy and better light distribution to be gained by the use of these lights; they have proved satisfactory in such locations as offices, record rooms and nurses' stations.

Delivery and labor rooms and nurseries should have conditioned air and controlled temperatures. Except in these areas air conditioning is usually beyond the budget of most hospitals. However, some climates and conditions justify the expense for air conditioning rooms other than those mentioned.

Control of relative humidity in operating rooms or where anesthetics are employed is helpful in reducing explosion hazards. For the nurseries, cooling is not usually needed but clean and humidified air, properly regulated, is desired.

Some hospitals have several premature nurseries in which different degrees of relative humidity are maintained. Other hospitals use the

individual humidifying crib unit and some, a combination of arrangements.

The central system in which several rooms are conditioned consists briefly of filters, heating coils, fans and motors, spray humidifiers, cooling coils and air blender units with direct fresh air connections.

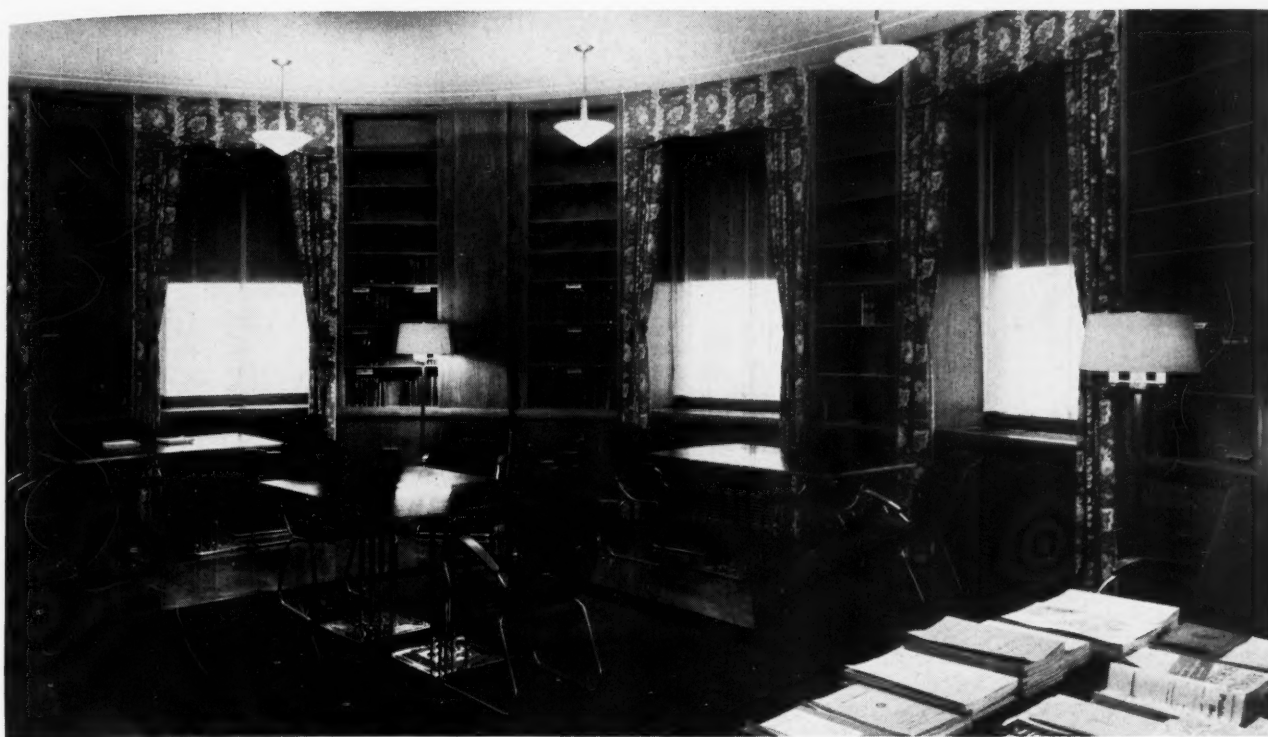
Plumbing and sterilizing equipment of the maternity department requires much study. Every patient's room should have a lavatory. Sub-sink rooms and toilets between single rooms should be equipped with bedpan emptying devices; such rooms should be located so as to remove bedpan service from the main corridors.

A combination utility and sterilizing room for each nursing unit, although requiring a large floor area, has proved valuable. With this arrangement one side of the utility room is set aside for clean work and the other, for soiled work. With this

plan sufficient space may be had for general utility work without crowding. The clothes chute, many times located in the main corridor, could be located in this room and thereby eliminate noise from this source.

Many improvements have been made of recent years in sterilizing equipment. The new washer instrument sterilizer is a time saver and also permits complete and dry sterilization in one process. The advantage of a central dressing sterilizing room with solution making facilities lies in the fact that all work can come under a single supervisor. This plan also eliminates duplication of services and keeps this type of work out of the sterile operating field. In small hospitals with a limited personnel, this arrangement is not practical.

Any apparatus that permits safer and more efficient work is certainly worth while procuring for patients.



The attractive medical library at Triboro Hospital, an institution for the tuberculous at Jamaica, N. Y.

Doctors' Quarters

GEORGE S. HOLDERNESS

Associate, Eggers & Higgins, Architects

WHEN the doctor goes to the hospital it usually is not for a clambake! The business that carries him there is grim, vital business involving relentless warfare on the agencies that weaken and destroy life. He goes armed with physical and mental equipment designed and cultivated for his specialized mission. In many cases his ability to swing into action quickly means the difference between life and death. In all cases the urgency of giving the doctor a free and unimpeded path is elementary.

To this end hospitals have recognized the necessity of placing at the doctor's disposal many "extraclinical" facilities which expedite his appointed rounds and which at the same time add a modicum of comfort to his normally arduous life. Such amenities are mutually advantageous, resulting in improved care of the patient and in greater contentment of the staff.

This effort toward smoothing the doctor's way makes itself manifest before he enters the portals. A convenient, adequate parking area reserved for doctors enables the physician to arrive at and to enter the hospital almost in one motion. He is at the bedside of his first patient while he otherwise might still be searching, even as you and I, for a place at the curb. His temper is still sweet, and he has not been forced to park at a fire hydrant or athwart the hospital's main entrance. In many urban hospitals, unfortunately, providing a doctors' parking area is more easily said than done.

With the flipping of a small switch on the widely used electrical in-and-out board, the doctor registers his arrival in the hospital without breaking his stride. When thus flipped, the in-and-out board presents the doctor's name illuminated for all and sundry to see and records it automatically on a similar board

before the switchboard operator. During his peregrinations about the establishment contact with each doctor is neatly preserved by means of electrical paging devices actuated by the operator.

Convenient to the administrative section is usually found a sort of central headquarters for staff doctors. At its unhappy minimum, as in the smallest and least progressive hospital, this sometimes consists of a meager cloak room with hat shelf and hooks below, each doctor being left to follow his individual instincts in the matter of toilet and rest facilities. In the average case, however, it embraces an adequate locker room, an attractive lounge and an up-to-date washroom, all arranged en suite and of areas in proportion to the size of the hospital. Offices for heads of departments and private consultation rooms are provided in some institutions.

The staff lounge is in effect a men's club; without any great architectural elaboration the proper atmosphere can be obtained by appropriately masculine draperies, pictures and furnishings, including plenty of easy chairs and ash receivers. Necessary here are the telephone (in an enclosed booth) and doctors' pager.

In the staff locker room the use of individual full-height lockers is desirable. Although the customary lockers are 12 inches wide and 18 inches deep, dearth of space sometimes dictates a width of 7½ inches with two hat compartments, one above the other, located overhead and each one having a width of 15 inches—equal to two of the lockers below. One hat compartment and one locker are keyed alike. Lockers installed on the room base and furred out at the top have obvious advantages in appearance and cleanliness. The normal facilities in the washroom are lavatory, urinal and water closet stall, with fixtures duplicated where required by the number of persons using them. Mechanical ventilation of the staff lounge, locker rooms and washroom is recommended.

In the well-planned institution, locker and rest rooms for doctors are found elsewhere as well, notably in the operating and the obstetric departments. When warranted by the size of the staffs and permitted by space conditions, these facilities frequently comprise a locker room and a separate but connected rest room, the latter furnished with a couch, chairs and one or more small writing desks. In the average hospital these accommodations are provided in a single room.

In either case the suite includes a connecting washroom containing a shower bath, in addition to fixtures of the types listed for the principal staff rooms in the administrative section. A separate locker room and connecting toilet facilities sometimes are provided for the interns as well.

A medical library is an important adjunct of any hospital, although in some it has not progressed beyond the embryo stage. The library is a storehouse of knowledge accumulated over a long period by leaders in the ramified medical profession and constant use of it is a potent weapon against stagnation. Here also is found the multitude of specialized technical journals with which the profession is blessed. For the convenience of the doctors, the library is located preferably near the staff lounge and should have good natural light for daytime reading. An acoustical ceiling and a resilient

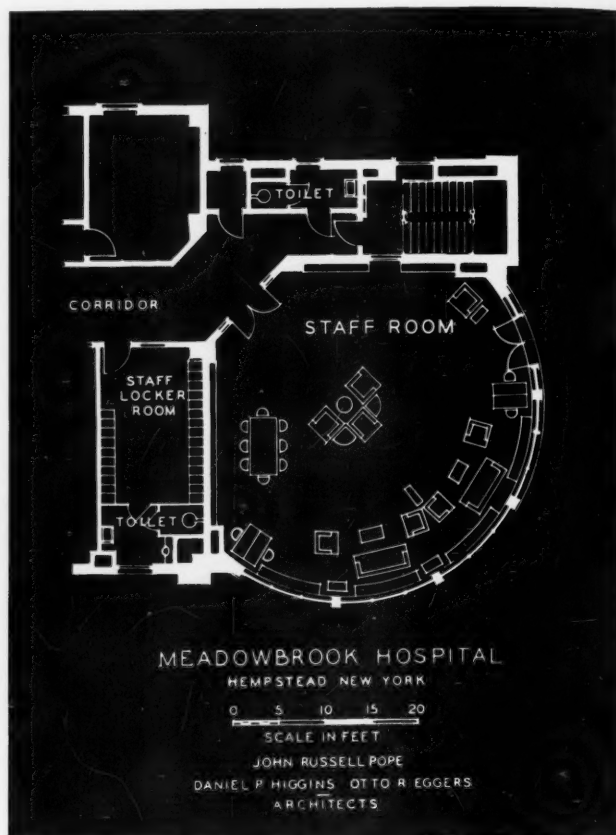
floor, such as cork or rubber, are desirable for the deadening of sound.

The size of a medical library depends largely on the number of volumes that the hospital possesses or expects to acquire. Ample empty shelving should be available for future acquisitions. Medical books average about 8.2 volumes per running foot and bound magazines, about 5 volumes. Shelves are spaced 12 inches from top to top, vertically, and should be adjustable, with con-

their hospital or themselves, the doctors must have a meeting room with a seating capacity ranging from about fifty in a small hospital to perhaps a thousand in a large institution. A room seating from 100 to 200 persons is the average.

A meeting room can be placed in any location having fairly easy and dignified access, not interfering with other hospital functions. Although mechanical exhaust is desirable for carrying away the usually smoke-

A doctor's life is not meant to be a dog's life and some hospital designers and administrators have done interesting things to remove it from that category. Here are pictured recent provisions for staff members, interns and residents.



venient facilities for the attachment of labels. Individual desks, general reference tables, magazine racks, storage tables, chairs and librarian's desk and files are the principal furniture.

In large libraries a separate room is provided for unpacking and cataloging, but in the average case this work necessarily is performed in the library on a work table set aside for this purpose.

For general electrical illumination of the library, indirect lighting is recommended, with direct lamps on desks and tables and portrait lights at the top of each group of shelves.

For the purpose of foregathering in the interest of their community,

laden air from doctors' meetings, an outside room is preferable to an inside location. Near-by toilet facilities are advantageous.

Projection equipment, including motion picture and stereopticon machines, should be provided; these may be located in a separate booth or upon stands placed in the rear of the room, depending to some extent on the requirements of local ordinances. A speaker's platform and projection screen, with loud-speaker, are necessary at the front of the room; frequently, a preparation or guests' room in that vicinity also is provided.

The ceiling of the meeting room should be of acoustical material and

high enough to permit the passage of projection rays over the spectators' heads. Lightproof window shades for daytime projection are advantageous. The proximity of a serving pantry is a convenience for the serving of light collations with which staff meetings frequently are concluded.

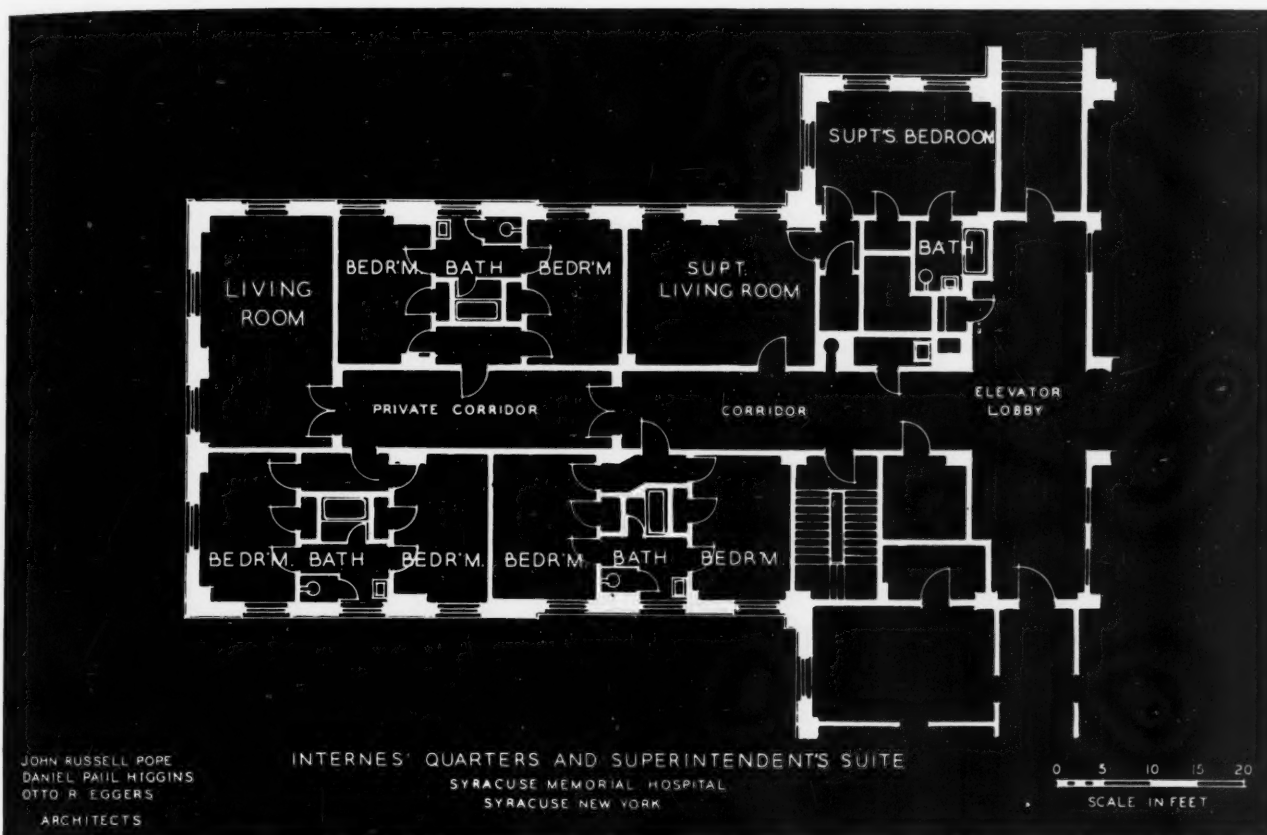
Although they are preferably set up as separate rooms, the staff lounge, library and meeting room are found also in various combina-

lecturer's podium and desk, blackboards and in some cases projection facilities.

Because of family ties and the demands of private practice, the older doctor rarely lives in the hospital. The desirability of having a limited number of interns in residence, however, is recognized by all administrators. As a general rule, there is one resident intern for every 30 or 40 patients, but special conditions at certain institutions might easily cause

ridor for intercommunication among the quarters' various rooms. Thus isolated, the interns are in effect removed from hospital atmosphere and yet remain instantly available.

Interns' quarters usually consist of a common living room, private bedrooms, a general bathroom and linen closet. The typical bedroom is about 9 by 14 feet and has its own closet measuring about 3 feet in width and equipped with shelf, hanging rod, hooks and, possibly, a shoe rack.



tions. The library is sometimes separated from the meeting room by a folding partition, thus giving the latter a flexibility of seating capacity. In hospitals with a high percentage of ambulant patients, the meeting room is sometimes used as a recreation center for them, where diverting entertainment of various kinds can be offered for its therapeutic value. In such cases movable rather than fixed seats are desirable.

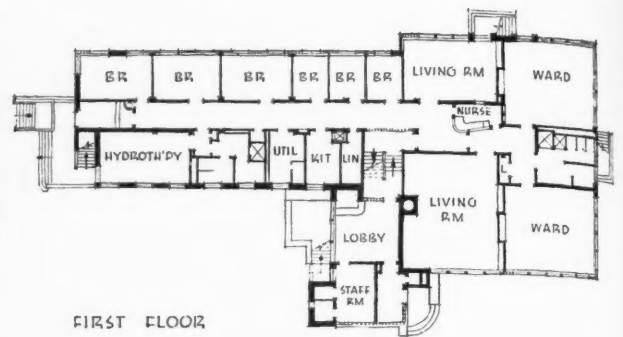
In teaching hospitals a special adaptation of the meeting room is found in the seminar or conference room, where class instruction can be carried on near the clinical material under study. Such spaces are usually equipped with armchairs, a

wide departure from these figures. Although they are not at the top of the hospital hierarchy, interns, nevertheless, are an extremely important element and are entitled to pleasant if not sumptuous accommodations.

Except in very large hospitals the interns are too few in number to tenant a separate house. However, even though located in the patients' building or in the administration building if directly connected, the interns' quarters are usually planned as a separate entity and are set apart from their surroundings. This can be accomplished by locating the quarters in a cul-de-sac at the end of a wing or by creating a subcor-

The furnishings in the bedroom include a single bed, dresser or chiffonier, table or desk, one straight and one easy chair. The living room is furnished modestly. A livable, domestic feeling can be achieved by a thoughtful selection of furniture, draperies, lamps and floor coverings without the expense of much architectural embellishment. In the general bathroom the toilet fixture is preferably enclosed in a stall.

The conclusion to be drawn from this recital of amenities in the doctors' hospital world is obvious and inescapable: a doctor's life is not meant to be a dog's life, and hospital planners are really doing something to remove it from that category.



1. Nurses' Station

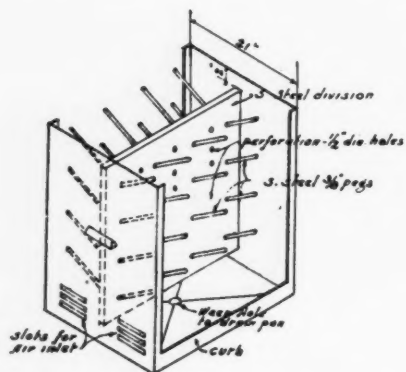
THALHEIMER AND WEITZ, Philadelphia architects, in the recently completed Philadelphia Psychiatric Hospital, have designed the practical nurses' station shown at the left. Its advantageous location may be seen in the plan above; one person on duty at the nurses' station in this small institution can control both private and ward sections. Above the wainscoting, the area of the nurses' station is a special glass demonstrated to be resistant to ordinary shock.

2. Public Washroom

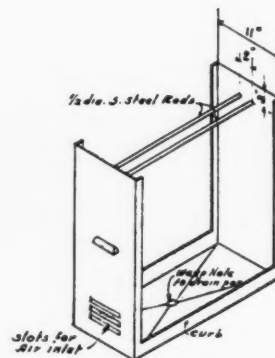
FRED W. BUCKY Jr., architect of Jacksonville, Fla., is proud of sanitary arrangements in the public washrooms of the Municipal Health Clinic at Jacksonville, recently completed. An effort has been made to minimize the number of objects a person must touch in using the rooms.

The vitreous china lavatory is fitted with a foot operated hot and cold control valve on the water supply line, which terminates in a goose-neck spout with a spray head diffusing the water. The lavatory is also equipped with a foot operated liquid soap dispenser, connected to a china tank above the lavatory by concealed piping. The drain has an open strainer so that washing can be done with running water only.

Not shown in the photograph at the right are the arm pulls of the hospital type with which doors are equipped, eliminating the necessity for handling knobs. Water closets are, of course, fitted with open front and back seats.



DRAWERS FOR RUBBER GLOVES

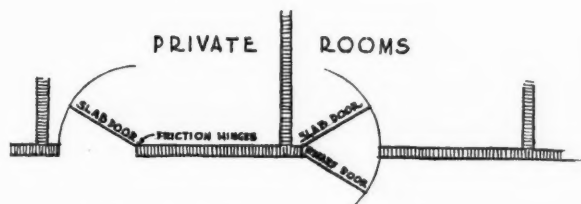


DRAWERS FOR RUBBER TUBING

3. Glove Drying Unit

MASSENA & DUPONT, architects of Wilmington, Del., have developed a unique feature in their glove drying unit, sketched at the left. During the six months it has been in use at Delaware Hospital, Wilmington, it has been most successful, Architect Edwin Young reports. It requires no attention except that of turning the articles once during the drying period.

4. Slab Door



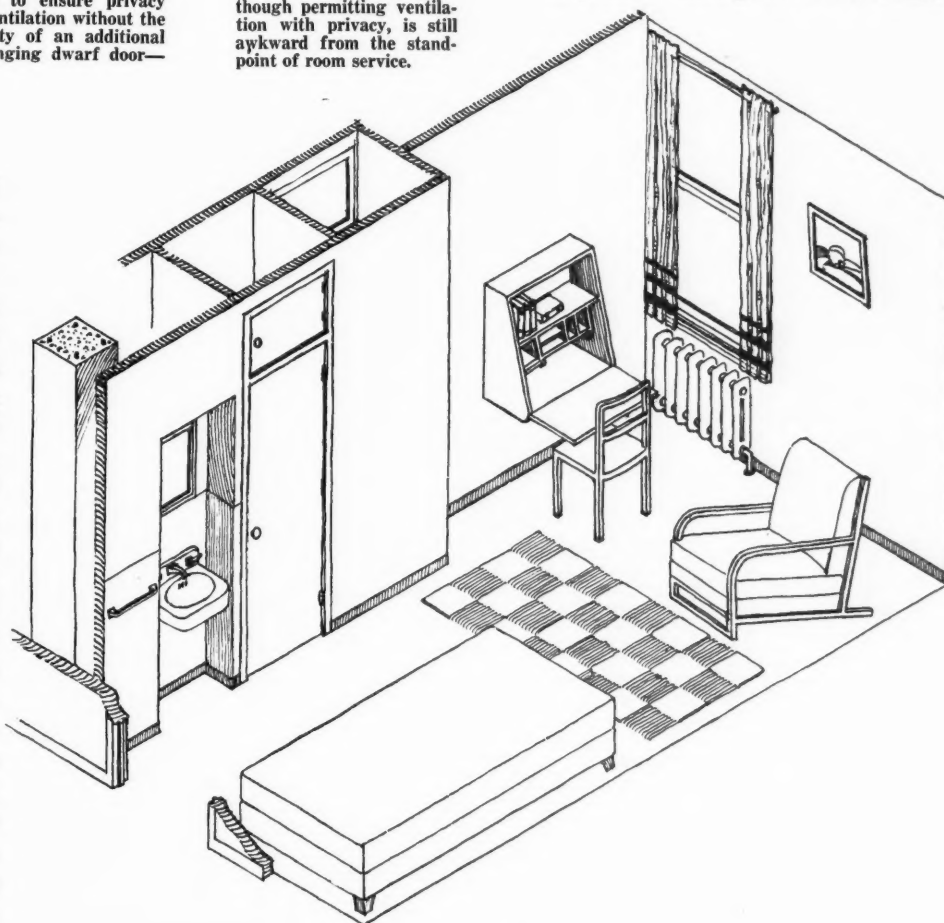
USE a door hinged to swing toward the corner and equipped with friction hinges to ensure privacy and ventilation without the necessity of an additional outswinging dwarf door—

INSTEAD of using a door hinged from the corner with the dwarf door, which, although permitting ventilation with privacy, is still awkward from the standpoint of room service.

HILLS, GILBERTSON AND HAYES, Minneapolis architects, suggest using friction hinges and swinging the slab door toward the room corner to provide privacy and ventilation in patients' rooms. According to James B. Hills, this permits the door to stand ajar without exposing the bed and its occupant to the gaze of persons walking down the corridor.

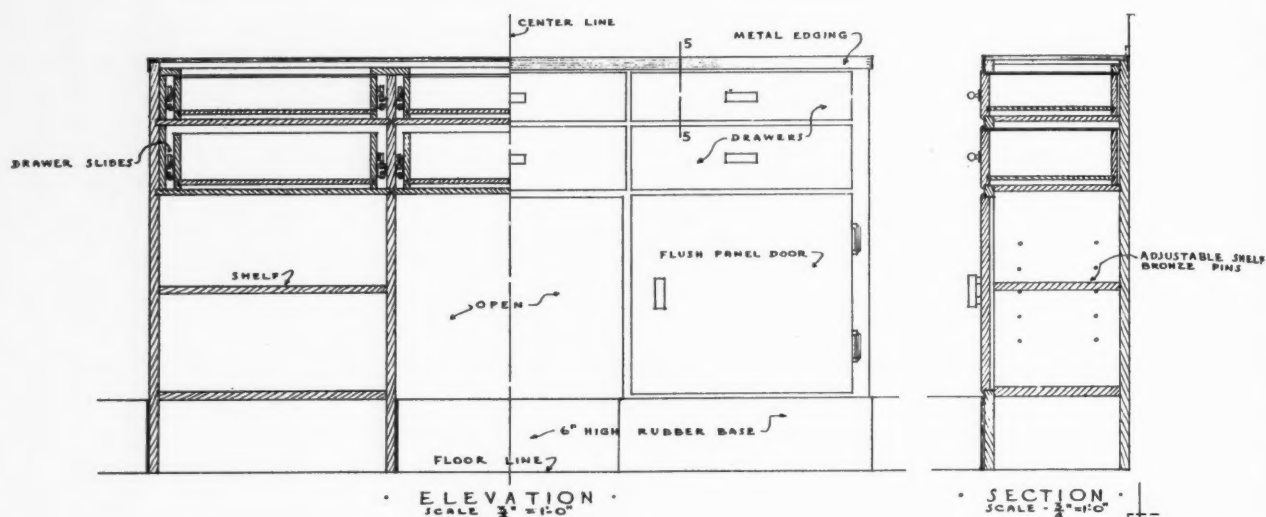
5. Nurse's Room

HILLS, GILBERTSON AND HAYES also furnish a second idea in the satisfactory and economical room arrangement in a recently completed nurses' residence. The rooms are arranged in pairs to simplify plumbing and wiring installations. Each room is 7 feet 10 inches wide at the widest portion and the overall length is 15 feet. Wall desks are made by the mill and bolted back to back through the partition. The closets are staggered and contain wood shoe racks and shelves. Above the doors are additional closets for storage of bedding and luggage. A linoleum wainscot protects the lavatory niche below the medicine cabinet and the adjacent towel hanging space. This room arrangement provides a living and study area near the window.

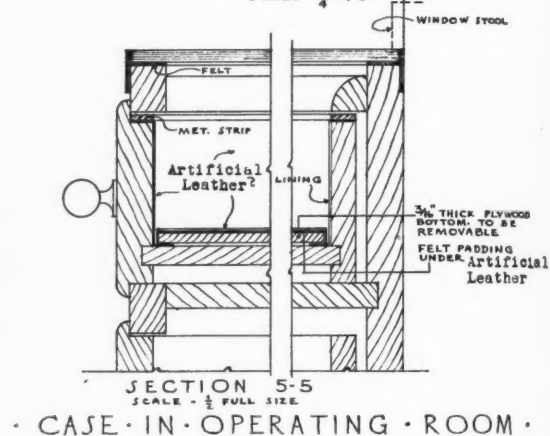


6. Nurses' Home

GEORGE BLUMENAUER, architect of Enid, Okla., was given the problem of building a home for nurses for the Enid Springs Hospital at a cost of less than \$8500. The residence was to house 18 nurses in double rooms; also, a head nurse. The home at the left is the result. It stands on an extremely small hillside lot; foundations are concrete and walls, brick veneer over standard wood framing. The fireplace is real and so is one of the chimney pots.



7. Case in Operating Room



SCHAEFFER & HOOTON, architects of Bloomington, Ill., built an interesting counter case for the operating room of the Gailey Eye Clinic in that city. The counter top is a sheet of polished plate glass through which one can look down into the drawers directly below. Each drawer is lined with artificial leather, while the bottom of the drawer on which instruments lie is padded.

8. Closet Dressing Room

F. P. PLATT & BRO., New York architects, have designed a bureau that disappears into the closet when the door is closed (see photograph at right). The bureau containing drawers, shelves and a mirror may be fastened to the inside surface of the ordinary closet door. It occupies $2\frac{1}{2}$ square feet of floor space and thus converts even a skimpy closet into a private dressing room. They recommend it for semiprivate accommodations.



Pneumothorax Suites

ISADORE ROSENFELD, JOSEPH BLUMENKRANZ
MORRIS ZEITLIN and THOMAS H. CREIGHTON

ARTIFICIAL pneumothorax, a semisurgical procedure performed under aseptic technic, with the object of obtaining a desirable degree of collapse of a lung or lungs by means of fluids insufflated into the pleural space, plays an important rôle in modern treatment of tuberculosis. (See article on page 108.) The planning of facilities for such treatment warrants careful study and a thorough understanding of collapse therapy technic.

Roughly, 40 per cent of hospital patients with tuberculosis, 30 per cent of sanatorium patients and 20 per cent of tuberculous out-patients receive pneumothorax treatments. These percentages may vary, based on the type of patient, method of treatment and unpredictable changes in tuberculosis therapy.

On the average, two pneumothorax treatments are given per patient per week in a hospital or sanatorium while out-patients are likely to receive refills only once a week. These figures also may vary, based on method of treatment.

For the purpose of calculating the number of treatment stations required, it can be assumed on the basis of current practice that, on the average, approximately six pneumothorax treatments can be performed hourly at one pneumothorax station in a hospital or sanatorium and about ten in a tuberculosis clinic of an out-patient department. Pneumothorax treatment sessions in a hospital or sanatorium are usually limited to four or five hours per day, usually between rest periods and meals. In an out-patient clinic for tuberculosis, such factors as personnel, number of treatment stations and frequency of clinical sessions determine the length of sessions.

Mr. Rosenfeld is chief architect, Mr. Blumenkranz is senior architect and Mr. Zeitlin is a former research assistant to the senior architect, Department of Public Works, New York City; Mr. Creighton is an architect in the Department of Hospitals, New York City. This article was worked out in collaboration with members of the medical staff of the Department of Hospitals.

The following formula was derived as a convenient method for determining the number of pneumothorax stations in a tuberculosis hospital, sanatorium and out-patient department.

$$\text{Number of Stations} = \frac{B \times P \times A}{D \times H \times N}$$

B, total number of tuberculous patients.

P, percentage of patients receiving pneumothorax treatments.

A, average number of pneumothorax treatments per patient per week.

D, number of days per week on which pneumothorax treatments are given.

H, number of hours per day in which pneumothorax treatments are given.

N, average number of treatments given per hour.

From the formula it is evident that in a tuberculosis hospital in which 40 per cent of the patients receive pneumothorax treatments on an average of twice a week, with four hours of treatment sessions daily, six days each week, one pneumothorax treatment station will be required for each 175 beds.

Further consultation with the medical administration will determine whether the minimum number of pneumothorax stations will be satisfactory or whether one pneumothorax suite per floor will be desirable even if the number of patients per floor is considerably less than 175. The effort and inconvenience of taking patients to another floor for treatment may outweigh the consideration of cost. For this reason, it is customary to provide a pneumothorax suite on each ward floor.

It should be borne in mind that in a hospital or sanatorium the pneumothorax suite is not used for pneumothorax therapy alone but is employed for general treatment purposes as well. This obviates the necessity of providing a general treatment room for each ward floor, in addition to the pneumothorax suite.

The pneumothorax suite should consist of the following units:

Pneumothorax Room: A check list of requirements is given.

Fluoroscopy Room: One fluoroscope can serve four pneumothorax stations operated simultaneously. Under normal circumstances, a fluoroscope is justified in the pneumothorax suite even if an x-ray department with an independent fluoroscopy room may be immediately adjacent.

Septic Tap Room: This is desirable, but not essential, as a separate space, for septic taps, which are performed occasionally on a relatively small percentage of patients who are receiving pneumothorax treatments, can be done in the pneumothorax room at the end of treatment sessions,

REQUIRED BUILT-IN EQUIPMENT

Deep clinical sink with one drainboard, knee or elbow control, and rose-spray faucet. Shelf over sink.

Instrument sterilizer, 24 by 16 by 12 inches.

Counter cabinet with shelves along one of the walls, about 10 feet in length in a hospital or sanatorium (about 6 feet long in clinic*) with an equal length of wall-hung cabinets with glazed doors above the counter.

X-ray plate illuminator for 4 plates, 5 feet 2½ inches by 1 foot 11 inches.

*In a hospital or sanatorium, storage space must be provided for blankets, pillow cases and sheets. The daily turnover of the hospital or sanatorium pneumothorax room is likely to be greater than that of the O.-P.D.

REQUIRED PORTABLE EQUIPMENT

Treatment table, 2 feet 2 inches by 6 feet

Alcohol dispenser (this may be made built in)

Four-drum carriage

Clean-up table, 1 foot 4 inches by 2 feet 10 inches

Glove drying rack, 9 inches by 1½ feet

Sterile instrument table, 1½ by 2½ feet

Pneumothorax machine on wheels, 1 foot 4 inches by 1 foot 8 inches

Waste can

One heater electric range (on counter cabinet)

Supply table, 1 foot 4 inches by 2 feet 10 inches

Soiled linen hamper

Floor lamp

In a hospital or sanatorium pneumothorax suite, storage space should be provided for a treatment cart, 2 by 4 feet, and an auxiliary pneumothorax machine, 1 foot 4 inches by 1 foot 8 inches, to be carted for bedside use on the wards.

In the out-patient department pneumothorax suite, a cot or stretcher for the rest room is required. An oxygen tank should be readily available in event of emergency.

making possible the sterilization of the room in preparation for regular pneumothorax treatments at the following session. A separate tap room is not needed in an out-patient department pneumothorax suite because septic taps are infrequently done in a clinic.

Rest Room: In an out-patient department tuberculosis clinic, a rest room or curtained-off rest space is

required. For psychological reasons, it should be so placed as to make possible the transfer of a patient from pneumothorax room to rest room without passing waiting patients.

Usually, one doctor and one nurse are needed to administer a treatment.

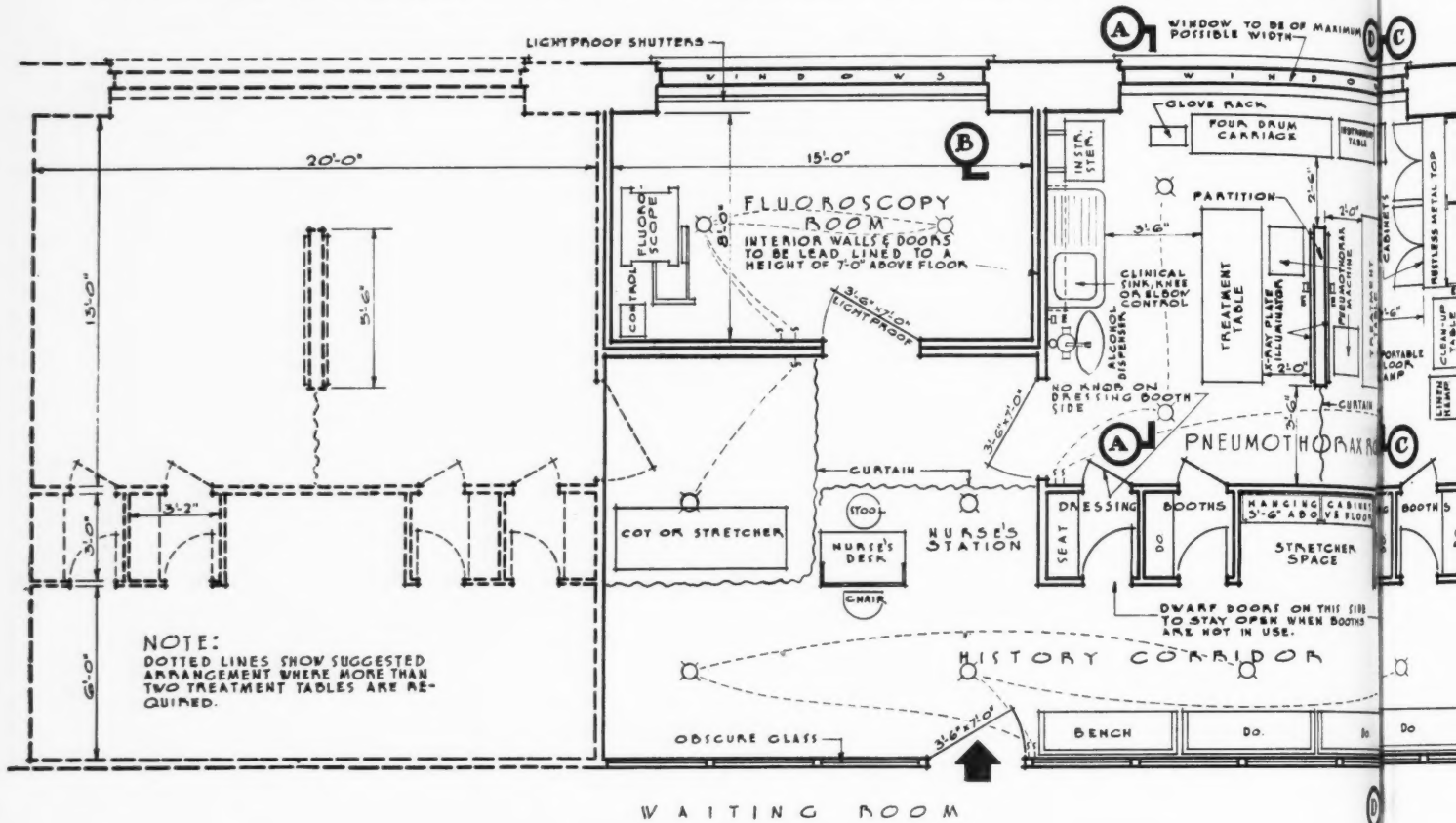
Required Convenience Outlets:

One electric receptacle over the counter cabinets for the electric range and two receptacles, one on each side of

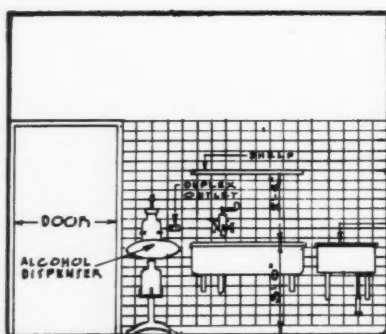
the treatment table for auxiliary apparatus.

In tap work it is customary to use syringes. However, convenience outlets are provided should mechanical aspirators be desired.

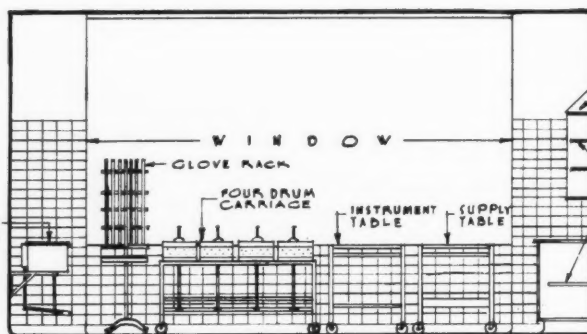
The accompanying illustration shows the standard for a pneumothorax suite developed by the authors on the basis of this study, which attempts to crystallize into a basic plan



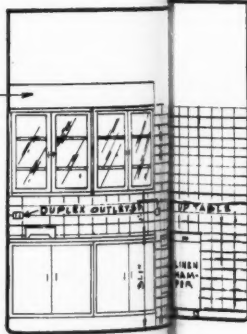
PLAN OF OUT-PATIENT PNEUMOTHORAX SUITE



ELEVATION A-A



ELEVATION B-B



ELEVATION C-C

DETAILS FOR OUT AND IN PATIENTS

SCALE: $\frac{1}{4}'' = 1'-0''$

the layouts arrived at in the new Triboro Hospital for Tuberculosis in New York and the out-patient building of the new Kings County Hospital, Brooklyn, N. Y.

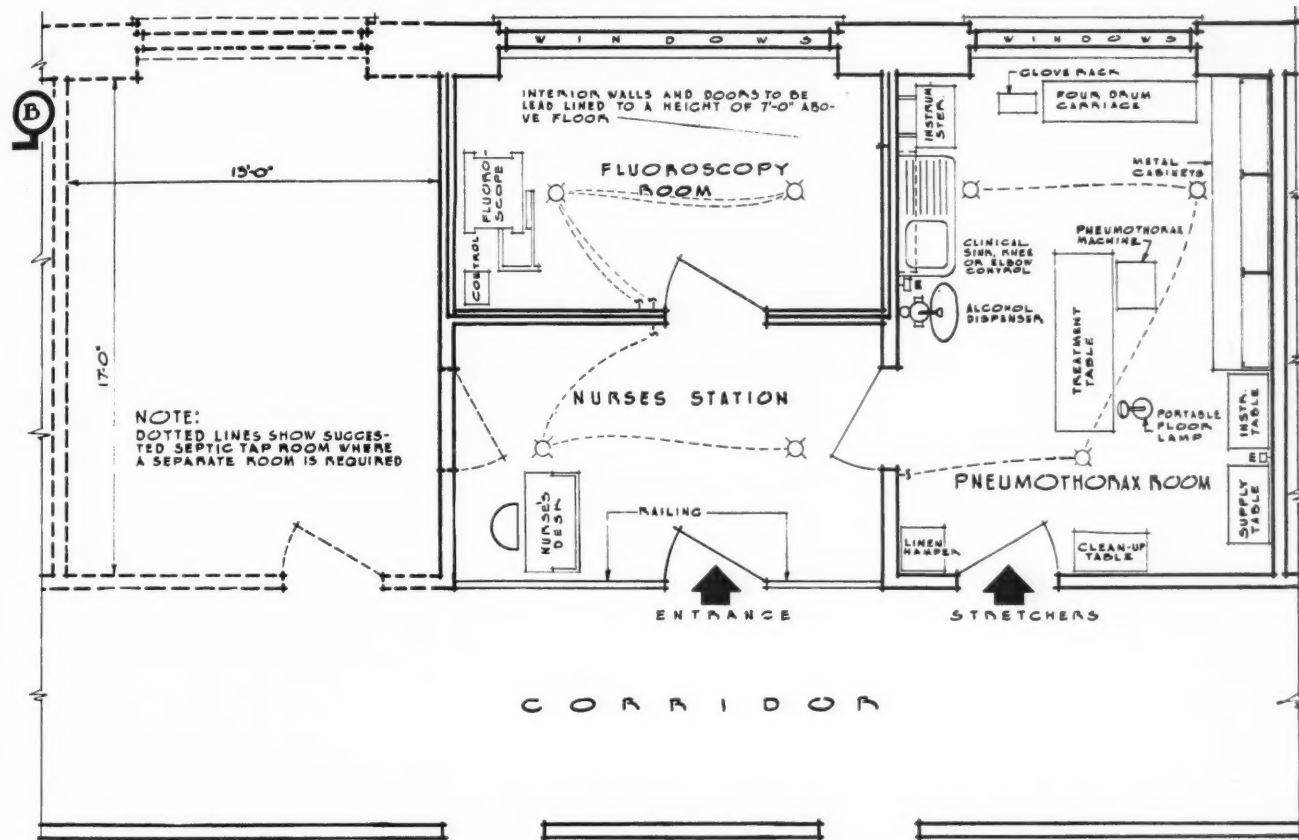
The standard layout of the pneumothorax room was made to accommodate two treatment tables separated by a dwarf partition, making possible free circulation from one treatment table to the other. This is

intended to conserve the time of the doctor who would otherwise have to wait for the undressing of patients.

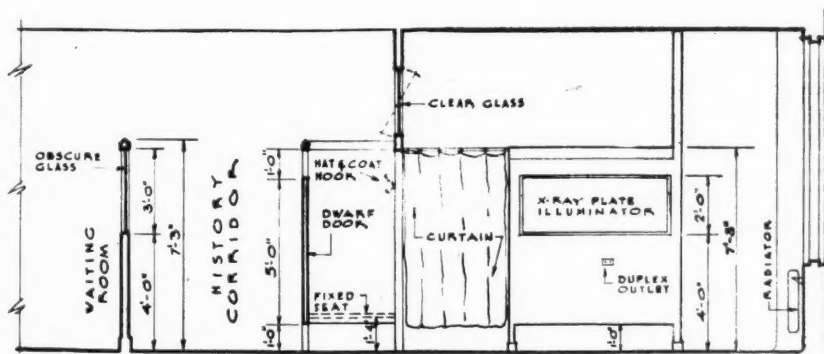
In the proposed plan, the doctor can move from one treatment table after completing his work on one patient to the other table, where another patient in the meantime has been made ready for treatment. The system of adjacent dressing booths permits quick turnover of patients.

The two treatment tables may be used as two independent treatment stations. The double arrangement permits two stations to be operated with the same fixed equipment.

A maximum possible expanse of windows is desired to permit an abundance of fresh air and sunlight to enter the room. This is important in every hospital but doubly so in tuberculosis institutions.



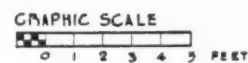
PLAN OF IN-PATIENT PNEUMOTHORAX SUITE



ELEVATION D-D

DIMENSIONS.
ALL SHOWN DIMENSIONS ARE MINIMUM.

LIGHTING:
EACH FIXTURE IN FLUOROSCOPY ROOM IS TO HAVE RED AND WHITE LIGHTS CONTROLLED BY SEPARATE SWITCHES. RED LIGHTS ARE FOR PREPARATION OF PATIENTS BETWEEN EXPOSURES TO AVOID FREQUENT CONTRAST BETWEEN BRIGHT LIGHT AND DARKNESS. THEY ARE CONTROLLED BY FOOT SWITCH AT FLUOROSCOPE AS WELL.



PNEUMOTHORAX SUITES

A LABORATORY animal may be anything from a mouse to a monkey. The only thing common to all laboratory animals is that they are kept in confinement.

The ideal experimental animal is so standard that it introduces no undesirable variables into the experiment. The variables may be considered as those resulting from genetic factors, those caused by variation in environment and those resulting from the activity of microorganisms. Therefore, the control of these variables is the principal problem involved in the housing and care of laboratory animals. Convenience and economy are of secondary importance, though they must be integrated in any design.

The variation among animals in a laboratory and the greater variation among stocks of different laboratories have long been recognized as an important limitation of present research. Add to this the frequent epidemics in animal colonies and the cross-infection of controls and there is present a problem that must come first when considering the establishment of a laboratory. Laboratories today should incorporate a plant for the production and maintenance of "standard animals" with more or less definite biologic tolerances.

The foundation work for the establishment of these principles has already been laid in the laboratories at the University of Notre Dame, as well as elsewhere.¹ The experience obtained from the design and maintenance of these laboratories is incorporated herein. The first diagram illustrates the units necessary for a good research plant as well as the relationship of one unit to another.

The plan shown in diagram 2 is one of the many possible combinations of the units essential to housing and experimenting on laboratory animals. It is used simply as a basis for discussion.

Stock Animal Rooms: These house the protected breeding stock. Once animals are taken from these rooms they are regarded as contaminated

¹Grateful acknowledgment of assistance is made to the staff in bacteriology at Notre Dame and, particularly, to my associate P. C. Trexler.

Housing Laboratory

JAMES A. REYNIERS

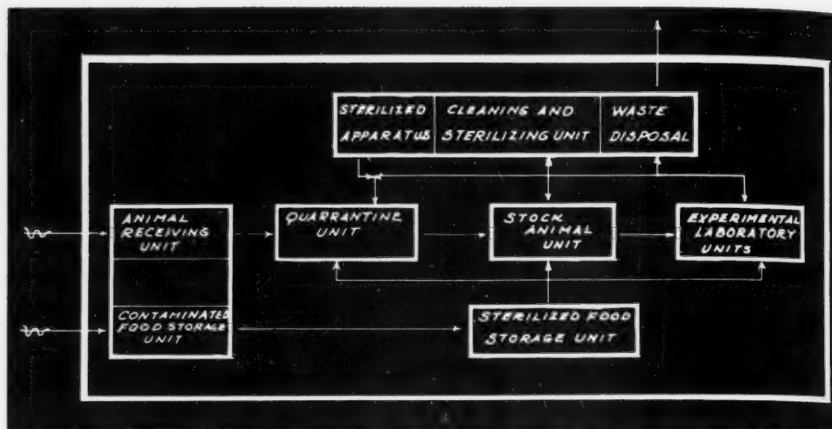


Diagram 1—Service units of plan for experimental animal laboratories.

and are not returned. No new stock is added unless it has first undergone quarantine. These rooms supply animals for critical experiments in which close control of the animal is desirable. The only fixed equipment is a small service sink supplied with hot and cold running water. The rooms are protected with ventilation traps and are usually located next to small storage rooms. The stock animal rooms are carefully ventilated and air conditioned.

Storage Rooms: These are ventilated but not air conditioned. They are equipped with a small service sink and function as a place in which "cleaned" food and cages are stored until used.

Ventilation Traps: These are placed at the entrance of any room in which a greater degree of isolation is desired. They are also placed in the corridor so that one section of the laboratories may be isolated from the other. They are in effect small rooms with two or more doors.

Ventilation follows the general pattern from ceiling to floor exhaust. The air pressure in a trap is slightly negative to the room or corridor that it protects. A trap functions to drain off escaping odors and to prevent the spread of air borne infective agents. Further protection against contact infection may be assured by placing a germicide soaked mat on

the floor and using the trap as a place to don sterile gowns or to free the hands of infective agents.

Sterilization Room: This room provides facilities for washing and sterilizing cages. It must be especially ventilated to remove steam and the animal odors that result from cleaning cages. Dirty cages are cleaned in a receiving room that is completely separated from the general room except on one side that ends in a steam chest. The walls make it impossible to go from the receiving room, which is considered contaminated, to any other part of the sterilization laboratory.² Dirty cages from which the bedding has been removed are placed on a rack and lowered into the steam chest where the cleaning is completed. After they are sterilized, they can be taken into rooms adjoining the storage rooms for further attention. The cages can be removed from the tank only by attendants who have not been in contact with the receiving room.

The sterilization tank is made of stainless steel and closes against a rubber gasket. Hot water in the tank is further heated by steam under pressure, which acts as an excellent means for removing dirt and debris. A ventilation hood is necessary to take off the steam and odors.

²A suggestion of Edward Foley, research technician, University of Notre Dame.

Animals

Director, Laboratories of Bacteriology
University of Notre Dame

The floor of the sterilization room is provided with a metal rack and is well pitched toward the drains. Metal floor racks remove animal matter from the boots of the attendant. These racks can be cleaned and sterilized in the same manner as the cages.

Quarantine Rooms: These units function as quarters for animals brought in from the outside. Several such rooms should be available. They are equipped and ventilated in the same way as are the stock animal rooms. They are best located at the opposite end of the laboratories. The quarantine room has a preparation room attached to it in which animals are uncrated and placed in the laboratory cages before being moved into the main room.

Experimental Units: These are smaller laboratories, each one devoted to a special experiment. They are furnished with a service sink and a microscope bench. The bench is not permanent equipment. A partition across the end of the unit permits it to function as a trap and small office. The office and experimental unit are ventilated separately and are air conditioned. Air pressure is positive from the experimental unit to the corridor; in other words, it is slightly higher in the experimental unit than in the office and slightly higher in the office than in the corridor. This is essentially the scheme used by Reyniers in the design of double cubicles for The Cradle in Evanston, Ill.³

Contaminated Materials Room: This room together with the attached preparation room is constructed according to the general laboratory design. Foods and other materials purchased from the outside are first brought into the preparation room where they may be unpacked. Grain foods are heated in a grain dryer and

³Erikson and Sauer: Control of Infection Begins in the Cradle, Mod. Hosp. 55:54 (Oct.) 1940.

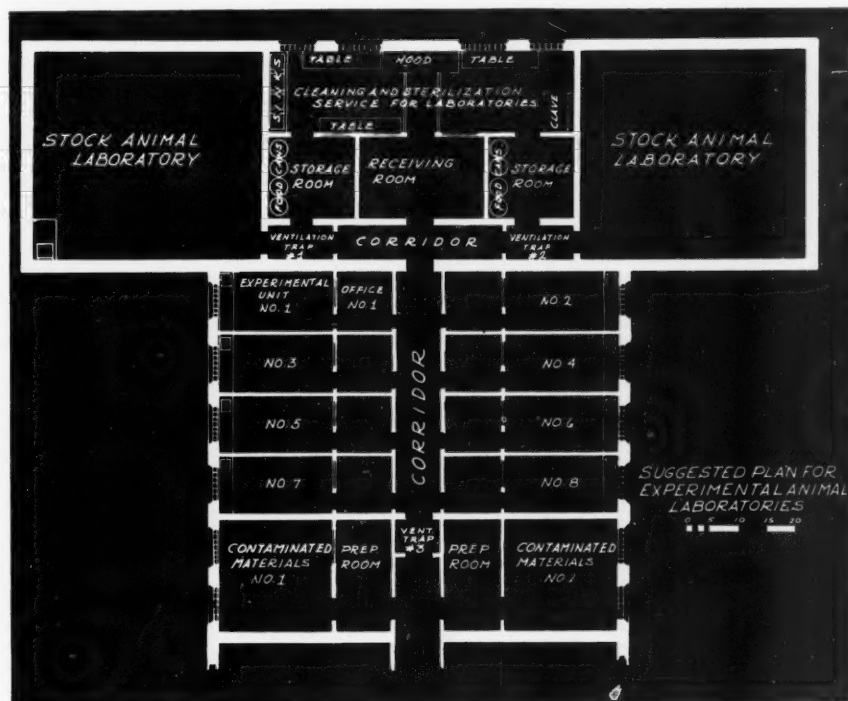


Diagram 2—Plan for experimental animal laboratories.

are placed in cans for storage as "cleaned food," *i.e.* food that is not infested. The cleaned food is stored in the main portion of the room until used. This room is ventilated but is not air conditioned.

Special Rooms: In addition to the units already described, several special rooms are necessary. For instance, any well-conducted laboratory should be furnished with a machine shop in which repairs to apparatus may be made. Other special rooms will suggest themselves in a specific design. In any event provisions should be made to set up several rooms for future use no matter how carefully or how completely the laboratory is planned. These rooms should be constructed so that they may be placed on the main ventilation or air conditioning system and they should be provided with necessary services.

An ideal animal laboratory should be constructed as nearly like the inside of a china bowl as possible and each room should be considered apart from the furnishings that might be added to it. In other words, the furnishings, whether they are cages, tables or benches, should not be permanent.

Floors are best constructed of abattoir tile or waterproofed concrete, which should be reflected up the

walls for at least a foot. The floor may be softened under foot by the use of strips of rubber matting in places where it is necessary to work. These strips are easily removed for cleaning. Generally speaking, it is unnecessary to provide drains in the floor inasmuch as mopping and scrubbing are satisfactory. If a drain is provided, it should be so constructed that it can be tightly closed off by a cap except when in use. This is to prevent insects, odors and drafts from entering the room.

The floor must be properly pitched to drain so that pools of water will not remain after washing. Door sills should be provided but they must be designed to permit trucks or cage racks to be easily moved in and out of the room. The corners of the room should be rounded with a generous cove base between the floor and walls. Care should be taken to see that corners can be easily cleaned to prevent accumulation of dirt.

The walls are tile blocks with an enamel finish and should be laid as large as is consistent with good design. If walls are finished in plaster it must be waterproofed and painted. If an iron spotted tile or similar material is used the surface should be treated to permit easy cleaning. The joints between the tiles should be well pointed and, if possible, painted,

especially in the animal rooms. The color of the walls is not important except that a dead white should be avoided.

The tile blocks are best carried from floor to ceiling, but if this is considered too expensive, it is better to go to some less expensive material in order to avoid breaking the wall with two different materials.

The walls should not be too highly glazed because of eyestrain; if this cannot be avoided lights used in the room must be diffused and of proper intensity. The walls should be coved at the ceiling and all corners should be rounded, especially where the walls are reflected to cover ducts.

Windows are unnecessary in an animal room if artificial ventilation is provided. If daylight is preferred, glass blocks may be used with construction flush to the room. If windows are used, large panes should be provided in a metal frame; the sills should slope. The most satisfactory arrangement is to use glass blocks inasmuch as they offer a good balance between daylight and insulation.

Doors should be metal with a pane of glass. They should be smooth and without ornamentation. Knobs, door and accessory hardware should be smooth. All doors should close against weather stripping or rubber gaskets. The door frames should be metal and special care should be taken to seal them tightly to the wall because cracks and crevices afford hiding places for insects and dirt. Moreover, the bottom of the door should fit the sill closely when closed in order to avoid cracks, which interfere with ventilation and cleanliness.

The ceiling should be concrete or waterproof plaster. Lights should be flush and watertight. The use of pyrex sheet glass eliminates cracking resulting from heat. If flush lighting is impractical, care must be taken to use fixtures that are waterproof and easily cleaned. Fluorescent lighting is excellent for animal rooms if proper consideration is given to the fixtures used.

If pipes and ducts cannot be concealed in the ceiling they should be dropped from the ceiling or held out from the wall at least 4 inches so that it is easy to clean around them.

Care must be taken to see that the joints between the pipes and the walls or ceiling are solidly closed to prevent insects and dirt from collecting.

Air inlet grilles are best placed in the ceiling, although satisfactory ventilation may be obtained if they are located in the walls near the ceiling and the outlet grilles, in the walls near the floor. The joints between the ducts and walls or ceiling should be filled in tightly. An insect barrier of copper screen should be placed across each duct opening. A diffuser, such as Aerofuse⁴ or Ane-

air to ensure dilution of air borne infective agents with subsequent clearing and the elimination of animal odors. Drafts can be eliminated by diffusers placed behind or in front of the air registers and by proper arrangement of cages in a room. In short, the aerodynamics of a room is quite important. The room should be ventilated in such a manner that the cages are bathed in a shower of air, which is drained off near the floor of the room.

Inlet registers should be placed in the ceiling or near the ceiling on the side wall and should be screened to

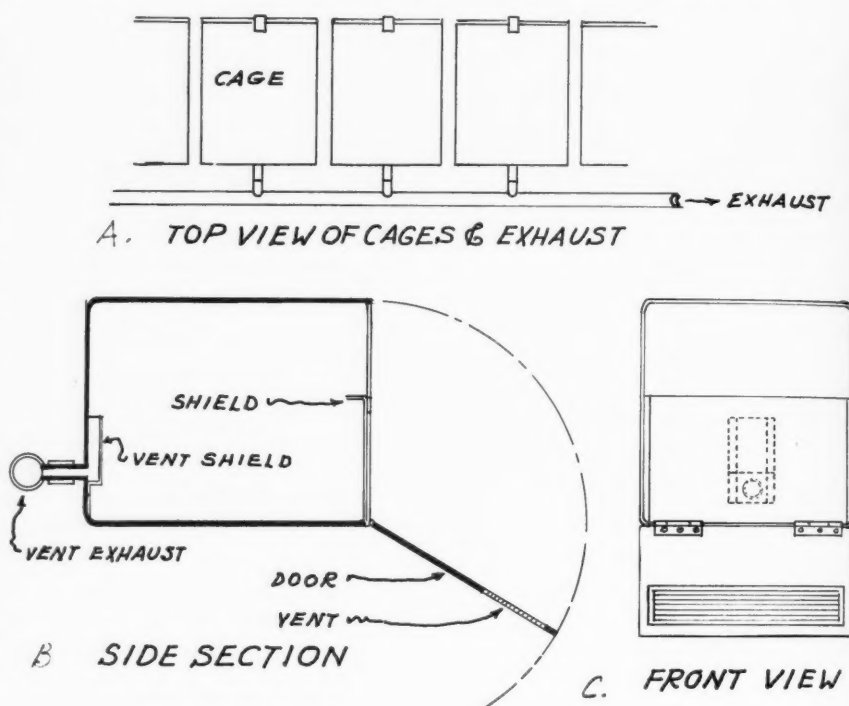


Diagram 3—Isolation cage used in experimental work.

mostats,⁵ might be used to prevent drafts.

All electrical plugs should be vaportight. Outlet plugs may be provided in the walls and should have a screw cap on them. Switches should likewise be watertight.

All animal laboratories should be artificially ventilated with filtered nonrecirculated air. Whether they should be air conditioned is a moot question.

Proper ventilation is important. This means an adequate air exchange without drafts. By "adequate" is meant sufficient change of

prevent insects. The register and duct should be long and narrow to give a better diffusion of air. Registers should be adjustable to regulate the flow of air into the room and out of it.

Outlet grilles or registers are placed near the floor and in each wall, if possible. The register should be adjustable and backed with copper screen. Construction is the same as for the inlets. Size should be calculated so that a slight pressure may be built up in the room with respect to the corridor.

Experience has indicated that it is best to filter all air on entering and leaving the room. This can be conveniently done by using removable

⁴Tuttle and Bailey, New Britain, Conn.

⁵Himelblau, Byfield and Co., 36 South Throop Street, Chicago.

filters of glass wool or paper placed in the ducts and readily accessible from the room so that they can be changed. It is better to use 100 per cent fresh outside air and not to recirculate it. However, if air conditioning is used this may be expensive and air may be recirculated if it is filtered "clean."

The ventilation requirements of a room will vary somewhat with the number of animals and for this reason some means, such as a register, should be provided to damp off the air flow; or the motors on the fans can be slowed down so that less air

The use of air conditioning permits more animals to be maintained in a given room space. This in itself is an advantage, provided efforts are made to reduce cross-infection by proper ventilation and by caging the animals. In other words, the use of air conditioning at the expense of adequate ventilation or air cleansing systems is not to be considered. Forced ventilation is a necessity.

An average temperature of 75° F. and a relative humidity of 45 per cent have proved satisfactory in our experience. It is possible to recirculate up to 20 per cent of the air in

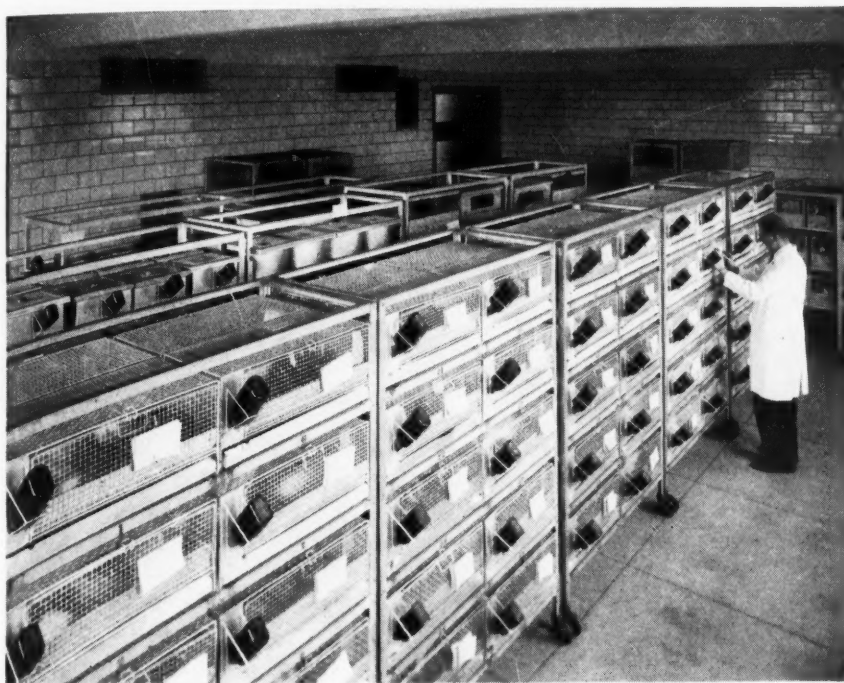
mer of 75° F. with an outside dry bulb temperature not exceeding 98° F. and a wet bulb not to exceed 78° F. and a R.H. of 45 per cent when the outdoor wet bulb does not exceed 78° F. An average temperature of 75° F. and a R.H. not less than 40 per cent should be maintained during the heating season.

Effort should be made to control ventilation noises by careful selection of proper fan design, use of sound-damping mountings and proper air diffusers. Because of the insect factor the use of acoustic absorbing linings in the ducts should be avoided.

Animal cages are best made of metal because they can be cleaned and sterilized easily. A good cage is one in which animals can be reared comfortably with the least amount of handling, of such a size as to be easily handled and of a design that can be easily cleaned. The cage should be well ventilated but drafts are to be avoided. If air conditioning is used, metal cages work well because of the even temperature and humidity. The bottom of a cage should be in the form of a deep pan to avoid scattering of infected bedding and to prevent the animal from splashing urine to the outside. Sides are made from a wire screen. The cage top is a frame covered with screen. The water bottle and feeder are hung on the outside of the cage. Animals are bedded in a thick layer of dry sterilized wood shavings.

Isolation cages for small animals used in experimental work may vary in design, depending on the size and kind of animal. A satisfactory type of cage is suggested in diagram 3. These cages can be placed on a special rack and ventilated from a manifold attached to an exhaust system.

All cages should be arranged in tiers on movable metal racks. Each tier can be separated from the other by sheets of pressed wood upon which the cages rest. Pressed wood is used because it is easier to handle than metal sheets and it retains its form better. The bottom tier of cages should be at least 24 inches from the floor. The cage arrangement on racks is shown in the photograph, a view of one of the stock animal rooms in the laboratories of bacteriology at Notre Dame.



Cage and rack arrangement. Air enters through grilles near ceiling and is exhausted near floor. Floors are terrazzo; walls, enameled tile block.

is inducted at the source of supply. It is usually satisfactory to effect a change of air every two or three minutes, but this will vary with the number of animals. The major factors in ventilation concern lowering bacterial content of air and diluting the "stale" air with fresh air to eliminate odors. Adjustments should be made to keep the air pressure in the room positive to the corridor, which can then be trapped as shown in diagram 2.

Air conditioning may mean a control of both temperature and humidity. Complete conditioning is a valuable tool in an experimental laboratory, especially if both temperature and humidity may be regulated.

an animal room if the recirculated air is carefully filtered. Most infective agents in an animal room are carried on dust so that it is good practice to filter the air. We have demonstrated satisfactory cleaning of air by passing it through a coarse screen filter to remove hair and then through one or two glass wool filters. It is to be noted that filtration will not remove animal odors and there is no substitute for fresh air in this respect.

The conditioning plant should have a capacity one third greater than would be needed for what might be considered as normal conditions. It should be capable of maintaining a temperature in sum-

Lessons From London

THE following suggestions, made in the light of experience at the London Hospital, which is located in a particularly badly raided part of East London, may prove useful to hospitals in the United States.

Protection

Splinter Protection. The bricking up of window and external openings to afford protection against splinters has been of value. Brickwork should be about 14 inches thick, set in cement mortar. The windows of basements suitable for shelters and patients' accommodations should be completely bricked up, with air-bricks for ventilation; windows at ground level should be bricked up to a height of 6½ feet above floor level and windows above ground level should be bricked to a height of 5 feet.

External doors not required for access or escape should be similarly bricked up, but doorways retained should be protected by a revetment wall of adequate width to cover and overlap the opening.

Glazing. Adhesive cellophane and applied varnishes are useless. Fabric varnished to the glass and overlapped on the frames is fairly satisfactory, as is wired glass. However, experience shows that the best protection is afforded by small (½ inch maximum) mesh wire netting mounted in wooden frames (removable for cleaning) and secured to the inside of windows. Previously made plywood or compressed millboard shutters for filling windows after loss of glass are invaluable. Temporary filling with reenforced paper and similar material is not recommended as this is easily damaged by the slightest blast or wind. The internal glazing in doors, borrowed lights and screens should be removed or protected.

Skylights and lantern lights require protection; where the glass is not removed a horizontal wire netting screen should be provided under the glass. In vulnerable positions the toplights should be protected externally against falling shrapnel and in-

centenary bombs by the equivalent of at least one layer of sandbags. If sandbags are used, they should be rot-proofed before use and covered on top with waterproof material.

Shoring of Floors and Roofs. Where possible, floors should be strengthened to withstand the additional loads of demolished masonry. For this purpose adjustable steel tubular props can be placed between main beams on all stories.

Blackout

Maintenance of sufficient ventilation and of efficient blackout is a problem that can be overcome by the construction of lightlocks.

Linen blinds can be "doped" with a suitable solution to render them lightproof; grooves for the edges of the blinds can be formed with plywood or cardboard fixed on the wire screen frames.

When curtains are provided the material must be absolutely opaque; some materials wear thin and shrink in use. Stocks of material for replacing loss from enemy action should be available.

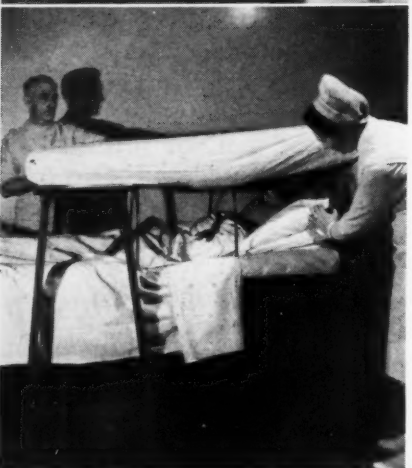
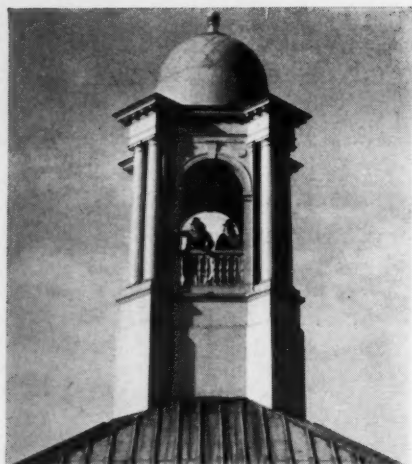
Attention to thorough measures for blackout is amply repaid as the slightest leakage causes apprehension to the populace.

Fire Precautions

Lookout Posts. Adequately protected lookout posts should be provided on the roofs from which the whole of the roofs can be observed and telephones should be installed by which the observers can report to a central post.

Access to Roofs. All roofs should be easily accessible and ladders and gangways, with edges painted white, should be provided. Obstructions should be similarly painted and dangerous parts railed.

Timber Constructed Roofs. Such roofs, the undersides of which are not easily accessible, are a grave fire risk. To obviate this risk, access holes through ceilings should be made. The coating of all timber with fire-resisting paint is strongly recommended as is also the covering of



NEW HAVEN HOSPITAL, New Haven, Conn., rehearses for bombing raids: spotters in watch tower; auxiliary firemen on roof; patients protected by mattress barricade in corridors; skylights painted.

In Regard to Air Raid Protection

wooden floors under such roofs with 2 inches of sand.

Fire Appliances. Incendiary bombs are best extinguished with a partly filled sandbag. There should be ample provision of such sandbags (rot-proofed before filling with sand) in all parts of roofs, buildings and grounds. Soda-acid extinguishers are usually of insufficient capacity to be of value. Stirrup pumps are indispensable, as are also the larger types of "corridor" pumps, *i.e.* tanks on wheels fitted with a pump and a short length of hose. Water and dry sand containers should be placed at frequent advantageous positions.

Caution should be taken before purchasing any chemical preparations marketed for use in dealing with incendiary bombs as some liquids cause fumes which, in enclosed spaces, definitely distress the personnel.

It should be remembered that water supplies from roof storage tanks do not give adequate pressure on roofs and upper stories where incendiary bomb fires are most likely to occur; therefore, provision for boosting the pressure by pumps in hydrant mains should be made. Mobile petrol-driven (gas-driven) fire pumps are invaluable for direct use with hose and for boosting hydrant mains.

Fire Party. Personnel should be trained in the use of fire appliances and have knowledge of all means of access to roofs.

Ether. Blast may capsize ether bottles and create a fire danger. Supplies for immediate use should be small and should be replenished from bottles kept in buckets of sand fixed to the walls or floors. Bulk ether and other inflammable stores should be under ground and away from the buildings if possible. Foam fire extinguishers should be available for use on spirit fires.

Electrical Supplies

Damage to the public supply system of electricity may take weeks to repair. Supplies for immediate use in operating theater lighting should be available from a battery, but this battery cannot be recharged if mains

failure is of long duration. A petrol or oil engine generator of sufficient capacity to give the minimum requirements for lighting and power (x-rays, ventilation, refrigeration, lifts) should be available for emergency use.

Lifts. Electric lifts can be worked by hand in great emergency. Hydraulic lifts may fail through damage to mains or reduced pressure owing to use of water by the fire brigade in the area. Provision of a hand-power stretcher lift is urged.

Cooking. Failures of steam, gas and electricity render essential the provision of coal or oil stoves and appliances.

Boilers. The boilers should be protected if exposed to risk of damage by falling shrapnel and blast. During raids the steam pressure should be reduced to a minimum. Fuel storage should be maintained in case of a transportation breakdown.

Shelters

Basement shelters should have adequately strengthened ceilings and bricked up window openings, due regard being given to access. Tools for the use of occupants in clearing a means of escape should be provided. Bunks for staff use can be improvised by supporting, in tiers, bedstead wire mattresses.

Water Purification

Damage to sewers and adjacent water mains may cause pollution of water supplies and consideration should be given to chlorinating all water.

Radium

The measures for the protection of radium no doubt will be given by governmental recommendation.

Stocks

Reserves of materials for engineering and drainage repairs, timber for temporary shoring, tarpaulins, oil lamps, translucent material for replacing glass should be obtained and decentralized throughout the basements of the buildings.

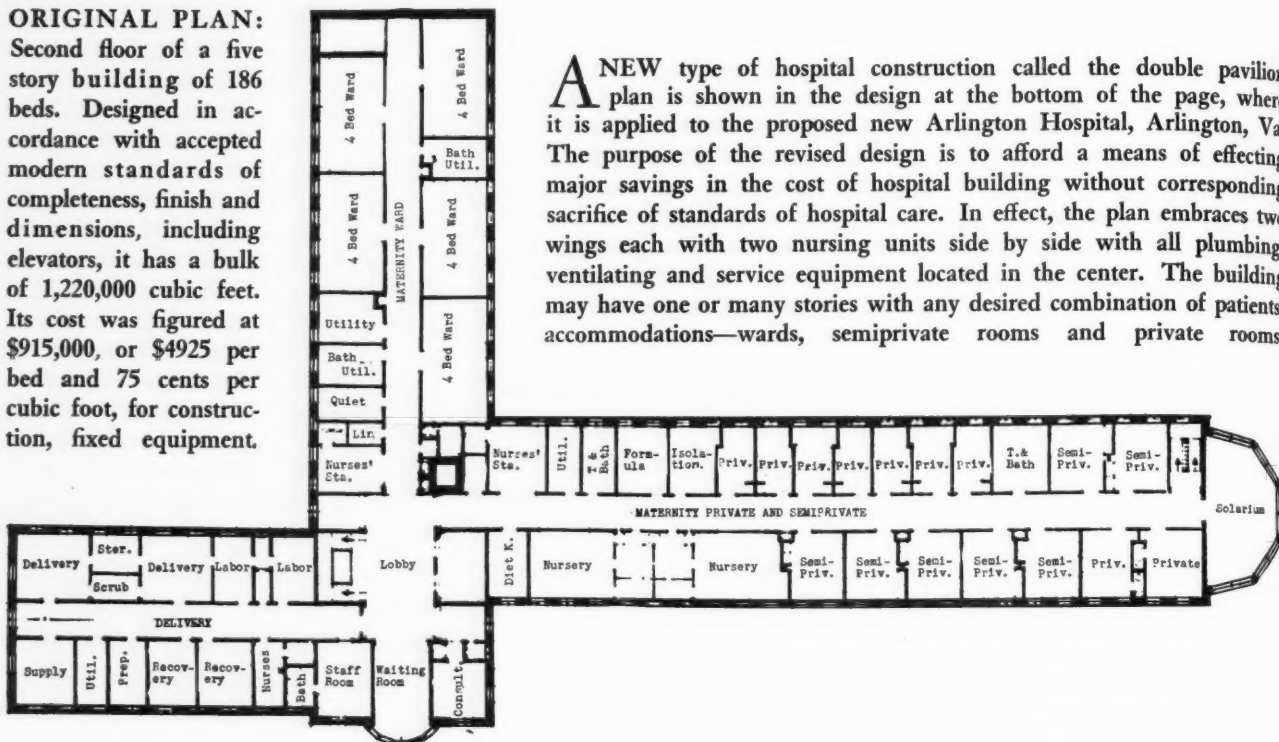


MOBILE UNITS at New Haven set out; cots and blankets are rushed from storage; Red Cross and Yale aids and volunteers set up emergency room, while hospital technicians check the blood plasma reserves.

Double Pavilion Plan

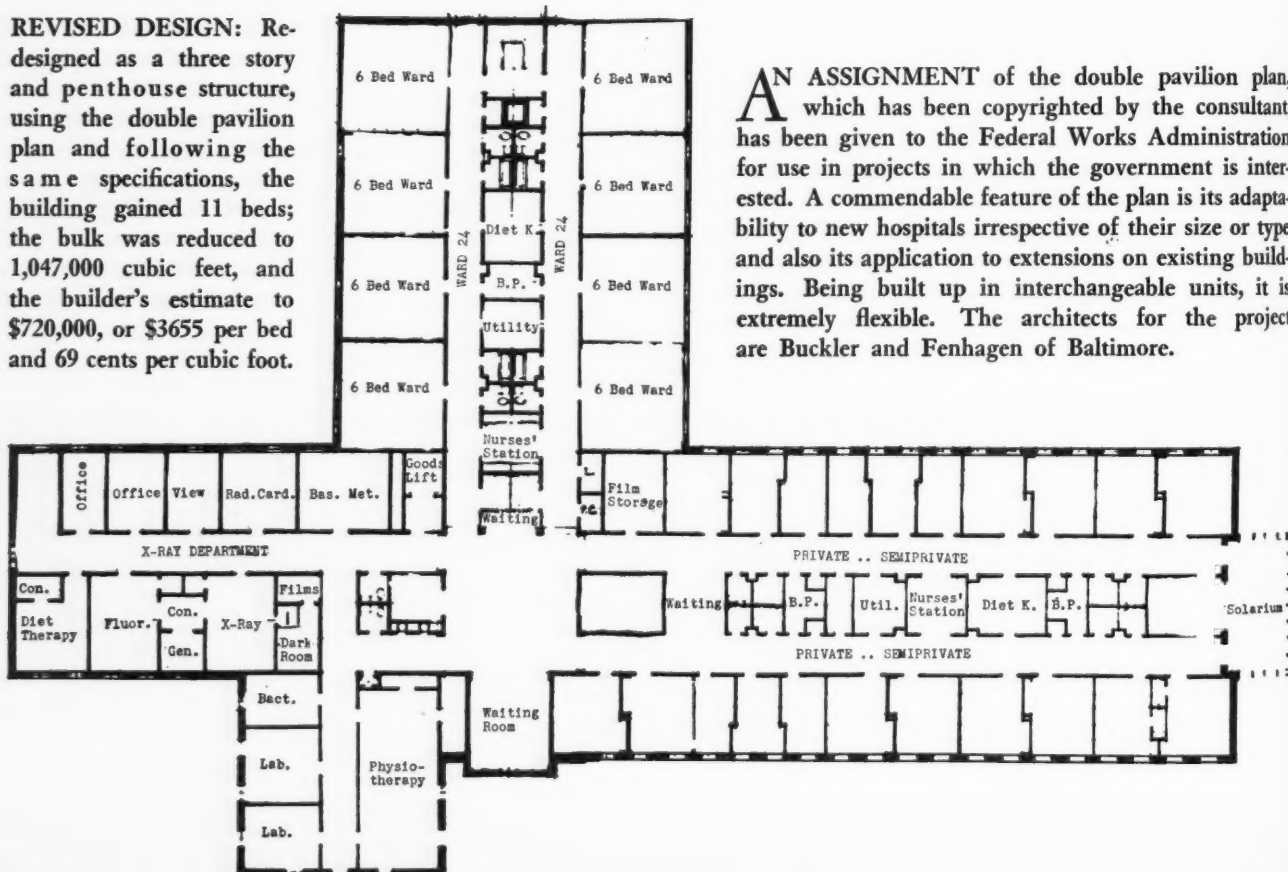
CHARLES F. NEERGAARD
Hospital Consultant, New York City

ORIGINAL PLAN: Second floor of a five story building of 186 beds. Designed in accordance with accepted modern standards of completeness, finish and dimensions, including elevators, it has a bulk of 1,220,000 cubic feet. Its cost was figured at \$915,000, or \$4925 per bed and 75 cents per cubic foot, for construction, fixed equipment.



A NEW type of hospital construction called the double pavilion plan is shown in the design at the bottom of the page, where it is applied to the proposed new Arlington Hospital, Arlington, Va. The purpose of the revised design is to afford a means of effecting major savings in the cost of hospital building without corresponding sacrifice of standards of hospital care. In effect, the plan embraces two wings each with two nursing units side by side with all plumbing, ventilating and service equipment located in the center. The building may have one or many stories with any desired combination of patients' accommodations—wards, semiprivate rooms and private rooms.

REVISED DESIGN: Re-designed as a three story and penthouse structure, using the double pavilion plan and following the same specifications, the building gained 11 beds; the bulk was reduced to 1,047,000 cubic feet, and the builder's estimate to \$720,000, or \$3655 per bed and 69 cents per cubic foot.



AN ASSIGNMENT of the double pavilion plan, which has been copyrighted by the consultant, has been given to the Federal Works Administration for use in projects in which the government is interested. A commendable feature of the plan is its adaptability to new hospitals irrespective of their size or type and also its application to extensions on existing buildings. Being built up in interchangeable units, it is extremely flexible. The architects for the project are Buckler and Fenhagen of Baltimore.

Defense Against Gas Attack

As Prepared by a California County*

THE threatened use of lethal and noxious substances in war makes it necessary to plan for the protection of residents in cities and the personnel of industrial plants. The hazard is very different from that offered by bombs. Hospital heads need to study the subject in order to protect their patients and personnel and also in order to treat intelligently the cases that will be institutionalized following release from decontamination centers.

Many different substances may be used and they may be grouped into four general classes:

- Blistering Agents, or Vesicants.
- Lung Irritants.
- Tear Gases, or Lacrimators.
- Toxic Smokes.

In World War I many substances of each class were used; in fact, the most effective substances possess the properties of at least two classes. The use of mixtures of compounds permitted all effects to be produced simultaneously. The complexity of the problem creates confusion. More important still, noxious gases are formed from ordinary high explosives and while they are relatively harmless could produce panic among a gas-threatened population.

Detection Left to Specialists

In view of this, the initial training of block wardens and of the general population will be largely drill in self-preservation in the face of a gas attack rather than a detailed study of all the war gases and their effects. Fortunately, under the conditions now existing (January 1942), the measure to be adopted in protection against the most probable gas hazards will also protect against the several others that are possible. It is unnecessary for everyone to be able to detect the presence of dangerous gases and to determine their nature, even if that were possible.

*Prepared by a subsection on chemical warfare and gas defense of the Alameda County Civilian Defense Council, Oakland, Calif.

The organization of gas protection in Alameda County, California, rests upon the following procedures:¹

1. General air raid alarm.
2. In case of attack, the gas wardens² search for gas. A primary responsibility of gas wardens is the detection and identification of chemical substances used by the enemy and the reporting of such to the proper centers for action. They are drilled in the means of recognizing the substances most likely to be used. As far as possible, they are selected from among the graduate chemists of the community and are located so as to provide several for each area.

3. If gas is found, the gas warden communicates with area headquarters through the block warden system of communication. The area warden sends out a gas alarm to the affected districts. The alarms to be used are steel triangles mounted upon motorcycles. The number of motorcycles to be available in each area will depend upon the size of the area. Residents in houses or shelters shall close all cracks around windows and doors of at least one room to retard entrance of gas and provide themselves with damp cloths to breathe through.³ Industrial plant personnel is warned by the warden service of the plant and is provided with gasproof shelters.

4. If the gas is nonpersistent and blows away, an all-clear signal will be sounded; if it is of the persistent type and the district must be vacated, block wardens will call residents from their shelters and direct them to the nearest first-aid station. The all-clear gas signal will be a huntsman's horn, each mounted upon a

¹This is not identical with the procedure recommended by the U. S. Office of Civilian Defense.

²The Office of Civilian Defense prefers to restrict the term "warden" to the air raid warden whose duties and responsibilities are specifically identified.

³The use of damp cloths to breathe through is of questionable value as protection against gas and these warning instructions are not necessarily applicable to all localities, says the Office of Civilian Defense.

motorcycle. The time for entrance of gas into a closed shelter allows time for evacuation. A sealed shelter will allow several hours, if necessary, for block wardens to give notice; under some circumstances rapid evacuation will be actually inadvisable.

5. Decontamination squads clean up infected districts, as required.

Gas wardens function under the direction of the sector wardens of their respective sectors. Until it is evident that chemical warfare is to be a constant menace, they will be the only wardens trained specifically for gas detection. Their instruction will also include methods of decontamination of property of all kinds, as well as practice in the operation of first-aid stations for gas casualties.

All People Need to Know

A general understanding of chemical warfare as applied to civilian areas is highly desirable and the following questions are commonly raised concerning it: (1) What substances are likely to be used and what are their properties? (2) How will they be used by the enemy? (3) How can their presence be detected? (4) What protection is available? (5) What is the probability of such substances being used in this area?

The course of training given gas wardens gives highly technical answers to most of these problems; the training of first-aid station operators includes a detailed drill in the treatment to be given those exposed to gas of different types under various circumstances; the training of block wardens provides for warning of the presence of gas and the action to be taken in the affected districts. For his own protection the average person should have at least a general statement of fact.

1. More than 4000 compounds have been tested as to their value in warfare. They vary from the familiar hydrogen cyanide, which is used as

RECOMMENDED OUTLAY OF EQUIPMENT FOR CIVILIAN DECONTAMINATION CENTER

The following equipment is required for one squad of 12 men:

- | | |
|--|------------------------------------|
| 20 cans (50 lbs. each) chloride of lime | 20 pounds clean rags |
| 1 drum (55 gal.) acetylene tetrachloride (labeled) | 24 "Danger—Gas" signs |
| 1 jar (25 lbs.) noncorrosive decontaminating agent* | 2 garden hoses, 50 ft. lengths |
| 1 gallon lubricating oil, medium (labeled) | 25 pounds of government issue soap |
| 2 cans (5 gal. each) kerosene (labeled) | 4 oilers, with spout, 1/2 pt. |
| 4 whitewash brushes (long handled) | 4 kerosene lanterns |
| 4 decontaminating apparatuses, M2, 1 1/2 quart* | 6 flashlights |
| 4 decontaminating apparatuses, 3 gal. (pressure type), complete with paddle and strainer | 1 screw driver, 6 in. |
| 1 box (12 tubes) shoe impregnate, M1 | 1 combination pliers, 6 or 8 in. |
| 10 yards cheesecloth, medium 2 inches wide | 4 gasproof curtains |
| 6 long handled shovels | |
| 4 rakes | |
| 4 scrubbing brushes | |
| 4 picks or pick mattocks | |
| 4 scythes or sickles | |
| 4 stable brooms | |
| 8 common brooms | |
| 8 G. I. buckets, 14 qt. | |
| 1 galvanized can, 15 gal. | |
| 1 single bit axe | |

The following items are recommended for each squad (12 men) in the first-aid kit:

- | | |
|--------------------------------------|---|
| 1 quart copper sulfate solution, 10% | 5 pounds government issue soap |
| 1 pound sodium bicarbonate | 1 gallon kerosene |
| 24 tubes protective ointment, M1 | 8 ounces hydrogen peroxide |
| 1 quart dichloramine T solution | 1 quart 5% sodium bicarbonate solution in 50% alcohol |

*To be obtained from the Army

NOTE: Protective clothing must be obtained from the Federal Government
(Extract from Pamphlet No. 12, Chemical Warfare School, November 1941)

a fumigant in ships and orange groves and as a means of executing criminals, to substances so rare as to be laboratory curiosities. They can be true gases or high boiling liquids of low volatility. Even a few solids have been used in the form of smokes.

Only about 50 of these substances have ever been tried in warfare and by the close of the last war 12 were still being utilized. Of these 12, few appear to have real value in an attack on a city or industrial plant. One of them, mustard "gas," is the only one that has been used in the present war; reports show that it was employed by the Italians against the Ethiopians and by the Japanese against the Chinese.⁴ Mustard "gas" would appear to be at least one compound with which we must become familiar. Fortunately, protection against it is protection against virtually all other hazards of this kind.

Mustard "gas" is a liquid somewhat less volatile than kerosene and both the liquid itself and the vapor

from it are very dangerous. The vapor is not immediately irritating so that there is little warning of its subsequent irritating effect upon the lungs, which may result in bronchial pneumonia. In odor it resembles mustard or garlic. It could be mistaken for illuminating gas.

If liquid mustard "gas" should be placed on the skin and allowed to remain for as much as one minute, a bad burn would eventually result. If one were exposed to the concentrated vapor for a few minutes without immediate treatment, a condition similar to a poison oak eruption of the skin would appear in from ten to twenty-four hours with no warning in the meantime of trouble to come. It is nonvolatile and is readily absorbed by porous materials; walking through droplets on the ground can infect the shoes and produce burns if the shoes are worn a week later. Clothing that has been sprayed with it or clothing that has had a chance to absorb the vapor is equally dangerous.

Besides this vesicant action on the skin, the inhaled vapor produces lung lesions in the course of several days; death is likely to follow. For-

tunately, a very diluted vapor can be inhaled for periods up to an hour without serious results if the patient is treated as a severe pneumonia patient, *i.e.* kept absolutely quiet in bed for some days after exposure. Similarly, it requires a relatively long exposure to mere traces of vapor to produce an effect on the skin.

First aid from contact with either vapor or liquid is a rapid and thorough shower bath using strong soap. Washing the hair, irrigating the nasal passages with a solution of baking soda, and rinsing the eyes with a boric acid solution are a part of the initial treatment for even a suspected case.⁵ Known exposure warrants still further preventive measures at the decontamination station, followed by absolute rest.

2. Airplanes can distribute mustard "gas" by dropping bombs containing it; an explosive in the bomb will scatter the liquid. Since only a small amount of explosive will be present in each bomb and the explosion is correspondingly weak, the observer has a chance to distinguish a gas bomb from a demolition bomb, which contains only high explosive. An alternative method of distribution makes use of a low flying plane to spray the liquid over a wide area in much the same manner as planes are used to scatter insecticides over fields.

In either case only the area in which the liquid falls and for a short distance to leeward will be infected. Such an area must be evacuated as rapidly as possible and the inhabitants given first aid. Since falling spray is much more dangerous than vapor, it is important for persons to remain under cover for some minutes after an attack to wait for the complete settling of the spray.

3. The detection of the presence of the "gas" is to be entrusted to special wardens drawn largely from the ranks of graduate chemists who are drilled in the recognition of the substances by odor and chemical tests. Special alarms will warn those in the infected areas of its presence. Block wardens will supervise the evacuation of the necessary districts.

4. It is probable that gas masks will not be issued to the population in general but only to those who find

⁵Mention is not made of calcium hypochlorite, which is the most effective agent for decontaminating the skin after exposure to liquid mustard.—O. C. D.

it necessary to remain in an infected area for some time. All wardens should have respirators and protective clothing. It may be assumed that during a raid everyone is under cover; upon hearing a gas warning it would then be necessary to retard the entrance of the vapor into the shelter by closing all cracks around windows and doors and by shutting off hot air vents and to remain in the shelter until the block warden indicates that it is time to evacuate the area. Experiments have shown that diffusion of vapor into a closed space is slow enough to permit occupants to wait for spray to settle and to be summoned by the block wardens to evacuate the premises.

A tightly closed room, supplied

by damp cloths to breathe through,³ is the best protection available at present. Rapid transit from the danger zone is to be provided by trucks; these will take residents to the decontamination stations for first-aid treatment, and under these precautions sufficient time is available. Decontamination of property and clothing is another problem for which directions are available.

Other substances may be used by the enemy, such as lung irritants and tear gas, that are more irritating but are more volatile, *i.e.* true gases. In such a case the same precaution of enclosure in a gas tight space with moist cloths available³ would offer safety for the hour or so that it might take the gas to blow away. Some

of these substances are so lethal that premature exit from the room might be fatal. The gas is sure to be more concentrated outside than inside during an attack.

5. In a war that depends so largely upon surprise for its success, it is hardly conceivable that the proved weapon of lethal or irritating chemicals will not eventually be used again. It is possible that new substances may be developed and used, but their physiological action will probably merely duplicate the action of those with which we are already familiar and the protection against them will be essentially the same. The best insurance against such attacks is a preparation that makes an attack futile.

TYPICAL WAR GASES AND THEIR RECOGNITION

Name	Type	Characteristics	Effects on Body	Lasting Effects.
Chlorine	Choking lethal	Bleach powder odor, light green color, highly corrosive on metal.	Coughing, eyes watering, lung injuring.	48 hours to life
Phosgene	Choking lethal	Green corn or musty hay odor, invisible, except at point of omission.	Coughing, eyes watering, lung injuring.	48 hours to life
Diphosgene	Suffocating choking	Liquid oily color, highly lethal and corrosive.	Coughing, eyes watering, lung injuring	48 hours
Chloropicrin	Choking, tear, lethal	Sickly sweet odor like fly paper, liquid oily-yellowish.	Coughing, eyes watering, lung injuring, blinds for 3 or 4 days, flulike pains in head and chest.	30 min. to 5 hours
Diphenyl-chlorarsine	Arsenical nose gas, nonlethal	Odor of shoe polish, solid white crystalline particles, invisible, slightly corrosive on metal.	Coughing, eyes watering, lung injuring, blinds for 3 or 4 days, flulike pains in head and chest.	30 min. to 5 hours
Arthur	Blood poison	May be either a gray powder or an invisible gas. The gray powder in contact with moisture gives off an invisible gas. The gas turns white detector paper to yellow or brown.	First signs are blood in urine, face becomes yellow; longer exposures produce headache, nausea and vomiting.	Months to life
Diphenylarsine	Nose gas, nonlethal	Odor of garlic, bitter almonds, solid colored crystalline particles.	Coughing, eyes watering, lung injuring, blinds for 3 or 4 days, pains in head and chest.	15 min. to 5 hours
Chloracetophenone	Tear gas, nonlethal	Apple blossom odor, dirty gray particles, slight tarnish on metals.	Tears, eyelid spasms, mild skin irritation.	5 min. to hours
Ethylidoacetate	Tear gas, nonlethal	Odor of pear drops, liquid only, brown or colorless.	Tears, marked irritation, sickening.	5 min. to hours
Dichloroethylsulphide (mustard)	Blistering (vesicatory)	Heavy oily liquid, color ranging from dark brown to straw, smells of garlic or horseradish, penetrates materials, detectors (paint and paper) show presence of liquid.	Severe inflammation of eyes, skin redness in 2 hours, followed by blisters, temporary loss of vision, loss of voice.	Days to life
Chlorovinyl-dichlorarsine (Lewisite)	Blistering (vesicatory)	Oily colorless liquid, gives off pungent smell of geraniums, penetrates materials in the same way as mustard, detectors show presence of liquid.	Permanent blindness, skin blisters develop more rapidly than mustard, causes inflammation of lungs.	Days to life

—The Canadian Hospital

Call for Nurses Is Heard

STATE and nation-wide surveys conducted during recent months by nursing leaders reveal the pressing demand for substantially increasing the ranks of graduate nurses for both civilian and governmental service in the defense emergency. Through the medium of state nursing councils on defense established in all states, as well as through close cooperation with other agencies having related activities and functions, an extensive recruiting campaign is now in progress.

To ensure intelligent coverage and presentation of the essential facts, portfolios providing full instructions for a month's campaign have been distributed to every state council. These include speech suggestions, radio talks, information addressed particularly to high school pupils and their parents, and also to college students and vocation counselors.

"Open House Week" Adopted

The proposal to designate one week as "open house" during which prospective students and their parents may inspect the hospital has been enthusiastically adopted by institutions all over the country. In New York City an assemblage gathered at Carnegie Hall recently to stage a rally in which hundreds of nurses participated. Although it is yet too early to estimate the results of this nation-wide effort, replies being received daily at the headquarters of the Nursing Council on National Defense indicate a growing appreciation of nursing as a profession.

According to studies made last fall by the department of studies of the National League of Nursing Education at the request of the Nursing Council on National Defense, approximately 5000 more students must be admitted to nursing schools this spring to fill the student quota of 50,000 that has been set as the goal for the school year 1941-42.

During the last month heads of such organizations as the American Nurses' Association, the National League of Nursing Education and the National Organization of Public Health Nursing gathered in New

York City to review the situation and to consider standards and present and future facilities for nursing education. Among other phases of the subject discussed at this time was the proposal to shorten the period of training. That this cannot be accomplished successfully in hospital training schools requiring merely a high school diploma was the general feeling. The situation does not necessarily apply, however, to those training schools that require college affiliation. In such instances, time may be saved through preclinical work completed in college.

Standards that have been established must be maintained. There will be greater need for properly qualified nurses during the postwar period than ever before in the history of the country. No one can tell at this point what the future holds, but we do know without question that the best nursing service possible will be required.

To Conserve Nursing Service

The present shortage of graduate nurses demands the closest study of existing nursing procedures to ascertain how such professional service can be conserved to the greatest degree possible.

As Dr. Frederick MacCurdy, superintendent of Vanderbilt Clinic, New York City, has so aptly described it: "The responsibility for this conservation lies with the hospital administration, its medical and nursing groups. They must evaluate existing hospital nursing procedures; they must build up programs within the institution that will permit the securing of a maximum result through efficient usage of the nursing service available."

The present emergency is revealing the true value of the services of a qualified nurse and the savings that can accrue through the more

economical and efficient use of these services. The introduction of volunteer workers trained as nurses' aids under the auspices of the Red Cross is one means of conserving nursing service during the period of acute shortage.

It is unlikely that the graduate nurse will continue to assume some of the duties expected of her in the past that have no direct application to patient care. Those duties that cannot be classified as nursing in the strict sense will become the responsibility of nursing auxiliaries or aids working under the direction of the graduate nurse.

Auxiliary Groups Organized

Recognizing the importance of developing this new classification and rendering every cooperation in its proper development, members of the Nursing Council on National Defense, which represents the six nursing organizations, have given considerable attention to establishing standards for auxiliary nursing groups. It was the consensus that "every attempt should be made to prepare qualified individuals to work under the supervision of graduate registered nurses in meeting community nursing needs in this emergency when the preparation and skill of a registered nurse are not required for continuous service as determined by the physician. This assistance may be given in the home, the hospital, the clinic, the dispensary, the health department, the visiting nurse association and other recognized public health nursing associations."

It is the purpose of the various nursing organizations to plan for the future in order to improve and safeguard the care of patients; it is hoped that it may be possible to prevent a recurrence of those problems that arose in the period of reconstruction following the first World War.

JULIA STIMSON, R.N.

President of the American Nurses' Association, and
Chairman of the Nursing Council on National Defense

as told to RAYMOND P. SLOAN

Springtime Activities

MORRIS HINENBURG, M.D.

Executive Director, Jewish Hospital of Brooklyn

THIS is the last in a series of four articles dealing with the factors of seasonal significance in the work of the hospital. The range of each of the preceding articles was limited to a given season and this one is, perforce, limited to a presentation of some of the factors peculiar to the spring months.

Preseason planning to adapt the services of the hospital to the changing seasons demands the attention of the administrator and his associates the year round, and the character of the institutional activities is improved substantially when the details of this planning are accorded meticulous attention. Like the seasons themselves, the transitions in the hospital program are not necessarily abrupt and the pattern of the activities of one season merges gradually with that of the season that follows. This is especially true of the changes from the winter program to the one organized for the spring.

Hospital occupancy, reaching a high level during the winter months, finds its counterpart in the spring months and, with no let-up in the demands for hospital service, there is hardly a breathing spell for personnel or equipment. The sustained period of hospital activity, with a continuous drain on the energy of personnel and the efficiency of equipment, subjects the preparations of the preceding summer and fall months to their acid test. If these have not been carefully planned and organized the defects may become apparent under emergency circumstances during the spring months.

Almost as soon as the winter is over the administrator turns his attention to the drafting of the summer vacation schedule for the personnel and the medical staffs. This requires both vigilance and ingenuity to maintain a continuity of efficient hospital service without adding substantially to the financial burdens of the hospital. A vacation program, to achieve this result, must be well

balanced and care must be taken to avoid, on the one hand, the employment of unnecessary vacation relief and, on the other, the overburdening of the regular employees by failing to provide adequate relief.

Almost simultaneously with the organization of the summer vacation schedule the administration arranges for the "spring roundup" of the damages caused by the ravages of winter. The program of repairs, to be started when spring weather conditions are optimum, must be planned carefully with the several divisions of the maintenance department coordinated for this purpose.

Despite its warmth and flowers, springtime, like the other seasons, comes laden with its own specific hospital problems

Damages to the exterior structures, walls, roofs, doors, windows, fences, walks and grounds, will require the services of the painters, masons, tinsmith, carpenters and other members of the mechanical divisions. Though this work may be started early in the spring, it generally carries through the summer and fall seasons, to be completed before the winter elements resume their disintegrative attacks. Interior repairs that are related to exterior damages should not be overlooked in the program of spring renovations.

When there are grounds about the hospital, their care must be anticipated by laying in a stock of the various supplies required to assist nature with its spring efforts to restore and maintain their beauty. The care of the grounds is generally met by the reassignment of employees who devote themselves to work of a seasonal nature at other times of the year or by those who are employed

on a temporary basis for this work and are released when their services are no longer required.

As soon as temperature conditions permit and before the revival of flying insect life, screens are brought out of storage to be secured in their proper places. This must be done carefully to prevent accidents that may otherwise occur from insecure fastening. The window cleaning schedule, reduced during the winter months, is altered to permit more frequent cleanings during the spring and summer months. A more rigid schedule for closing outside doors and windows must be observed to prevent water and window damage to walls and floors.

With the start of the daylight saving season, there is a sharp reduction in the demand for electrical energy. In the hospital that maintains a power plant for the production of electrical energy the boiler load and fuel requirements begin to approach those maintained on a summer schedule, making it possible to release individual units, both boiler and generator, for the essential repairs before the onset of the next heating and lighting season.

It is rarely possible at this time of year to include the accommodations of patients in the program of spring housecleaning. Only emergency repairs that may be required are performed, the general program of renovation of these parts being left until the patient census drops to a level that will free these units without limiting the capacity of the hospital.

With a moderation of temperature and more sunshine, employees naturally desire to spend more time outdoors during their free periods. Benches and chairs placed in selected spots about the grounds will serve partially to meet this need. When the hospital buildings are higher than those that surround them, roof space, properly provided with awnings and equipped with suitable weatherproof furnishings, may be used for sunbaths without the danger of prying eyes.

Nice weather inspires interest in athletics and a spring program of recreational activities for the members of the hospital family takes

shape with tennis, baseball and handball accorded the major share of attention. The season is marked by a series of social events, parties and dances for all groups of employees. These functions serve as a social medium to improve the relationship of employees to one another, an achievement that the conditions of their work alone cannot accomplish. The members of the governing board, encouraged to sponsor such affairs, will gain an appreciation of hospital employees as individuals apart from their places in the work of the hospital.

Staff Appointments

The program for the medical staffs, both visiting and resident, continues without significant change. The administration, looking ahead to the fall when appointments to the house staff are to be made, undertakes the revision of the prospectus forms describing the various appointments for distribution to medical schools and to hospitals in which qualified candidates may be available. Though all the essential information about house staff appointments may be available through a central source, such as the hospital number of the *Journal of the American Medical Association* or the approval number of the *Bulletin of the American College of Surgeons*, it is worth while making the data available directly to the offices of the deans of medical schools to whom the fourth year students turn for advice and guidance in the selection of internships.

There is no striking change in the character of the patient population during the early part of the spring season. The high incidence of respiratory diseases, characteristic of the winter season, continues into the early months of spring. The "sick house" requires the constant services of the full complement of medical and nursing personnel during the months of March and April and during some years this condition prevails during early May.

Communicable diseases show an upward trend and constant care must be taken to control admissions by adequate preadmission examinations for the proper segregation of patients suffering from communicable diseases. This is particularly true for the pediatric service of the

hospital where the census parallels that for the rest of the hospital. Aside from complying with the requirements of the health laws to provide adequate isolation accommodations, the precautions to exclude communicable diseases from the general wards must be rigidly observed if the hospital's capacity to meet the heavy seasonal demands for hospitalization is to remain unimpaired.

The variable weather experienced in many parts of the country during the transition from winter to spring is directly responsible for the continued high incidence of upper respiratory illnesses among employees. The incidence is approximately that of the fall months and the amount of lost time from services falls within almost identical limits.

With more daylight and with weather conditions more nearly ideal for getting about, the number of visitors to the hospital is substantially increased. The schedule of hospital service must be adjusted to handle the intramural traffic problems of routing these visitors to their patients. Outside of the hospital the problem of parking cars may become acute, so that members of the medical staff are compelled (unless special parking space restricted for staff use is provided) to park at a distance of several blocks from the hospital.

Department Planning

The housekeeper begins her preparations for the storage of blankets to be removed from circulation when temperature conditions permit. With a continued high census and with the increase in the number of visitors, a rigid schedule of performance must be maintained to keep the hospital at its best appearance. The purchasing department faces no unusual seasonal problem other than to explore the linen market which, during the spring, offers linens at the lowest prices of the year. The thought has been advanced that the period of heavy tax payments during March temporarily reduces the purchasing power for consumers' goods making selected items available at more attractive prices than are prevalent at other times of the year.

The dietary department, recognizing the physiologic reaction of the body to warmer weather, begins to eliminate the heat forming foods essential during the winter months

and in their stead introduces the lighter diets common to late spring and summer. These consist of moderate allowances of lean meat or its equivalent in eggs, cheese, milk or other meat substitutes, fruits and vegetables, crisp salads and light desserts. Prepared cereals replace cooked cereals.

Another nutritional factor of considerable seasonal significance is related to bacterial growths in meat and milk. Unless ideal refrigeration is maintained for these products, losses must be expected through spoiling.

Increased Out-Patient Census

The enrollment of patients in the out-patient department takes an upward turn during the spring months with the increased loads more pronounced in the pediatric, allergy and nose and throat services. The high incidence of upper respiratory diseases and the prophylactic therapy for patients who suffer from allergic disorders account in great part for the increase. Larger numbers of school children are referred to the out-patient department to make arrangements for tonsil and adenoid operations to be performed during the summer months. A system of reservations is required to regulate the admission of these patients for operation in an organized manner.

In a number of hospitals the social service department undertakes the responsibility of organizing a summer camp program for underprivileged children. The work is initiated during the spring months and deals in the main with obtaining funds to meet the nominal payments required by some camps and the arrangements for assignments at free camps maintained by voluntary organizations.

The observance of National Hospital Day on May 12 is marked by special programs in many hospitals of the country, especially in the smaller communities, though of late the hospitals of the larger cities have adopted its observance as part of their public relations programs. It constitutes one of the outstanding events of the spring season and when planned carefully to achieve its purpose it brings the community closer to its hospital and inspires a confidence based on mutual respect and understanding.

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How the Leaders Stand

on Social Security Proposal

SHARP differences of opinion over the proper attitude of hospitals toward the Social Security Board's proposal to include hospital care in the benefits under the Social Security Act were given ample airing at the various midwinter meetings of the American Hospital Association held in Chicago last month.

A compromise proposal involving cooperation with the federal government without a definite commitment to any particular program was finally worked out by the presidents' and secretaries' conference and approved by the board of trustees.

Under this program, a committee consisting of Dr. Basil C. MacLean, president of the association, Dr. Claude W. Munger, the Rt. Rev. Msgr. Maurice F. Griffin, Dr. Bert W. Caldwell and E. A. van Steenwyk was appointed to represent the A.H.A. to find out more fully the proposals of the Social Security Board and to cooperate with the board without definitely committing the association.

Committee's Guiding Principles

The committee was instructed to be guided by the following principles:

"That the voluntary hospitals of the United States, which account for more than 60 per cent of all hospital admissions, are a national asset of incalculable value.

"That the efficiency of these institutions is traceable in large part to their freedom of action under local control.

"That the independence of voluntary hospitals and of hospitals under city, county and other local community control should not be jeopardized by federal legislation.

"That programs seeking to widen the use of voluntary hospitals and their more perfect adaptation to the needs of the workers of the country through voluntary contributory plans merit government consideration and support.

"That a full opportunity should be given to the voluntary hospitals of the country through the American Hospital Association to study proposed legislation affecting hospi-

tals before such legislation is offered to the Congress."

Dr. S. S. Goldwater, president of the Associated Hospital Service of New York City, led the attack on the Social Security Board's proposal. He was invited to address the presidents' and secretaries' conference on two occasions; he framed the resolution of policy introduced by Carl P. Wright of Syracuse, N. Y.

Doctor Goldwater's attack on the proposal centered particularly on the effect it would have upon the voluntary principle of hospitals and Blue Cross plans. The present voluntary plans are adjusted to local needs, he said. Experimentation is permitted locally under self-control with guidance by the A.H.A. This precious opportunity for experimentation would be lost under a governmental plan, he declared.

Doctor Goldwater pointed out some of the burdens that hospitals would assume under the proposed \$3 per day payment plan, since workers would expect this to cover all costs and the hospitals would be put in the embarrassing position of either accepting it as payment in full or arousing the workers' opposition by asking for additional payments.

The time may come, Doctor Goldwater stated, when ward service plans will not be able to pay hospitals enough to meet necessary expenses; then we might well ask the government for aid to these voluntary plans. "But shouldn't we develop the voluntary system in accordance with American principles, basic principles of which the voluntary hospitals are so happy an expression?"

The problem is to find out where the voluntary hospitals have fallen down and to cooperate with the Social Security Board in finding the best method for conserving the health of the people, Guy J. Clark of Cleveland declared. "We should find out how we can use the government's interest to aid the voluntary hospitals. We should go to our trustees, community leaders and government with a real program."

Arthur Altmeyer, chairman of the Social Security Board, has stated that he will welcome the appointment of an A.H.A. committee to sit down with his staff and explore the whole problem and try to work out a plan that will protect the voluntary hospitals and the Blue Cross plans and yet do the job the board has in mind, Dr. R. H. Bishop, Cleveland, stated.

"The time has come when we must have a cooperative working relationship between the voluntary hospitals and the federal government," he declared. "It would be the greatest mistake of our lives to take an unequivocally opposed stand."

President-Elect Hamilton stated that if voluntary hospitals are to survive they must have some governmental assistance, including aid from the federal government.

Blame Placed on Management

The apathy, selfishness and ignorance of hospital administrators and boards of trustees were blamed for the present situation of voluntary hospitals by Dr. Frank Bradley of St. Louis. Blue Cross plans now cannot expand because of lack of hospital facilities and ward plans are not growing because some of the hospitals oppose them, he asserted.

"Where will President Roosevelt get sound advice on hospital affairs if not from us?" asked Dean Oppenheimer of Atlanta. "The people in Washington, including the legislators, need to learn from us about the value of voluntary hospitals."

Any committee going to Washington to consult about details must accept the basic principle of federal participation in the health insurance field, E. A. van Steenwyk believes.

The motion in the presidents' and secretaries' conference to approve of the coordinating committee's recommendation that a committee be appointed to explore the subject with the federal officials was approved with only one dissenting vote and the motion to instruct the committee to follow the principles previously outlined was approved unanimously.

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Arrangements for the Night

In 30 Institutions Surveyed

THE IMPORTANCE of adequate hospital service at night is being increasingly recognized by small hospitals, according to data provided to The MODERN HOSPITAL by 30 institutions for this Small Hospital Forum.

Twenty-two of these hospitals have delegated complete authority and responsibility for dealing with all matters that may come up at night to one person. The others continue to have the administrator or the superintendent of nurses or some other regular daytime employe responsible at night also.

"The need for competent supervision of the hospital at night cannot be overemphasized," writes William J. Donnelly, superintendent, Princeton Hospital, Princeton, N. J. "Intelligent, quick thinking is a necessity. The authority vested in the night supervisor should be clearly defined and recognized. The administrator must have confidence in, and back up the judgment of, the night supervisor. With adequate supervision at night, I see no reason why the superintendent of the hospital should be frequently annoyed while off duty and at home."

Thirteen of the hospitals report that they used the title "night supervisor" for the person in charge during this period. Only two call him or her "night superintendent." Other titles are "R.N. in charge," "resident surgeon," "senior night nurse" and "Sister in charge."

In 22 hospitals the superintendent reports that he is on call at night but only eight administrators report that they are called frequently. Apparently in the other hospitals the night supervision is competent to meet nearly all problems that may arise.

The ratio of patients to nurses at night varies over a wide range. This ratio was obtained by dividing the average patient census for the past month by the total number of nurses on duty in the hospital at night (defined as the period from 11 p.m. to 7 a.m.). This ratio is shown in the accompanying table.

Two hospitals have from four to five patients for each nurse on duty at night while three hospitals have 15 or more patients for each nurse, one of these having more than 20 patients per nurse. The great majority of the hospitals have from five to ten patients per nurse during the night.

This is in marked contrast with the ratios that hospital administrators feel are proper. When asked, "How many patients can one nurse care for at night under average conditions?" only three suggested a figure as low as 5 to 10, fourteen said from 10 to 15, five reported from 15 to 20 and seven stated that 20 or more could be cared for (one did not answer). Only one of the administrators thinks that the level of nursing in his hospital at night ought to be just what

twelve hour shifts were followed during the night and this would, undoubtedly, make a difference in the ratio of nurses.

In Mr. Donnelly's hospital, with an average patient census of 51, there are six nurses, one engineer, one business office employe, two orderlies and one resident physician on duty at night. This gives a ratio of about $8\frac{1}{2}$ patients per nurse and about $4\frac{1}{2}$ patients per employe for the night period. Similar ratios were computed for the other hospitals and are given in the table.

In the 19 hospitals that have an average census of less than 50 patients, the number of nurses on night duty ranges from one to seven. Only five hospitals have an engineer on duty at night and one of these stays only until midnight; only two

Ratio of Patients to Nurses and to All Employes At Night

Ratio of Patients per Nurse	No. of Hosp.	Ratio of Patients per Employe	No. of Hosp.
Under 5.....	2	Under 5.....	7
5 to 10.....	19	5 to 7.5.....	10
10 to 15.....	6	7.5 to 10.....	9
15 to 20.....	2	10 to 15.....	3
20 and over.....	1	15 and over.....	1
Total.....	30	Total.....	30

it is; 26 think that the nurses could care for more patients, and two think the proper load is lower than the present actual load.

In connection with this problem, Mr. Donnelly states that "the number of nurses assigned to night duty must be sufficient to care for the known needs as they present themselves at 7 p.m. and the extraordinary demands made by emergencies occurring during the night. In our particular instance, two members of the operating room staff are on call as is the nurse anesthetist or resident physician. This makes it possible for our general duty nurses to care for the patients in a satisfactory manner."

Unfortunately, the questionnaire did not ask whether eight hour or

hospitals have employes in the business office; seven have orderlies at night; three keep technicians on duty at night (most of the hospitals merely had technicians on call), and six have other types of employes on duty.

In the 11 hospitals with an average census of 50 patients or more, the number of nurses on night duty ranges from 4 to 15. All but two have engineers on duty, six have someone in the business office, seven have orderlies, only one keeps a technician on call all night and five hospitals have other employes (maids, practical nurses, cooks) available.

Early waking hours for patients are still the rule in most of the small hospitals reporting. Only two, however, report waking patients at

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5 a.m. and four, from 5:01 to 5:30. Nine institutions wake patients from 5:31 to 6 and seven, from 6:01 to 7 o'clock. Four wake patients after 7 or do not wake them at all, serving them breakfast whenever they awaken. In one hospital in which ward patients are awakened between 5:30 and 6, private patients are not disturbed until 7:30. Other hospitals do not report this difference in the treatment of the two groups.

The question of the proper hour for waking patients, of course, depends somewhat upon the habits and

traditions of the community. In many rural communities, most people are accustomed to getting up at 5 or 5:30 a.m., while many city dwellers do not waken until 7 or later. One university student health service does not awaken patients until 9:30, if they wish to sleep that late.

Administrators were asked to indicate whether they are in favor of letting patients sleep late. Of those who replied, 15 were in favor of late sleep and only 8 against it, although quite a number of those in favor

have not yet been able to introduce such a plan in their hospitals.

Wide differences of opinion on the question were brought out in the comments, some of which follow:

"Patients can rest and sleep much better if they are bathed after breakfast."

"Sleep is one of the essentials of recovery in the opinion of most physicians."

"Nothing is more appreciated than extra rest in the morning" (from the administrator of a hospital in which night nurses give morning washes between 6 and 7 a.m.).

"Most patients wake early and can be prepared and given breakfast; others can be taken care of later."

"Most patients complain of being awakened early, which is a just complaint. We have not had night nurses give morning care since we adopted the eight hour shift about two years ago."

From a hospital in which patients are awakened at 6 a.m.: "I should very much dislike being awakened at 6 a.m. to have *my* face washed."

On the other side are the hospitals that cannot seem to arrange the routine otherwise. Some of their comments follow:

"Routine is essential in keeping the work running smoothly."

"Late waking disrupts routine, delays kitchen help; later, the patients have no appetite for noon meal and become disgruntled with the diet."

"We would never get our work done."

"Some patients would not waken in time for breakfast, which is *always* served on scheduled time."

If there are definite healing values in sleep, it would appear that some hospitals put the convenience of employes and the maintenance of routine in a more important position than the healing of the patient. Perhaps this is due to the difficulty of working out a program that will enable the hospital to accomplish all that must be done in the time available. For hospitals that are eager to study the problem further, various articles that have appeared in *The MODERN HOSPITAL* will help: "Early Morning Care—Postponed," April 1939, p. 51; "Let the Patient Sleep," January 1938, p. 55; "Early Awakening Is Taboo," June 1936, p. 66; "Why Waken Patients So Early in the Morning?" January 1934, p. 81.

WOMEN'S SERVICE GROUPS

One Woman's Gift

• Members of the women's auxiliary of Orange Memorial Hospital, Orange, N. J., pledged themselves to raise \$5000 to build a solarium for the children's ward and have been busily engaged in holding various forms of entertainment, supplementing their personal solicitations. One substantial gift came from a patient in the hospital, a woman whose name is internationally known in the medical field. In the names of each of her 16 grandchildren she gave \$50 to the hospital, advising them of the gift in the following letter: *Dear Johnny:*

Since I have been sick I have enjoyed the sunshine, in my room and on the roof, so much that I have thought how nice it would be for the children who are in the hospital to enjoy the same benefit. In order to help make this possible, I thought you might like to have me make a contribution in your name to the children's solarium and I am, therefore, sending a check for \$50 as a contribution from each of my dear grandchildren—and in this way am celebrating my birthday.

*Much love from your fond
Grandmother.*

Another Hospitality Shop!

• Because there is no auxiliary of Northwestern Hospital, Minneapolis, other than its junior board, the trustees, who are women exclusively, operate their own "Hospitality Shop." This is a comparatively new venture started when the new building was erected.

"Already we are wondering how we ever got along without it," Mrs. Henry T. Atwood reports. "Of course," she adds, "it is still in the experimental stage and, undoubtedly, certain changes will be necessary as time goes on. But, already we feel it has definitely proved itself to be a great asset to our hospital."

Sandwiches, coffee, tea, ice cream, pie, doughnuts—these are a few of the soda fountain items appearing on the menu. A popular feature is "room service" at no extra charge. Workers take orders and do the delivering. Although a few members of the junior board assist occasionally in the hospital shop, they have their own project, a Thrift Shop, operated outside the hospital for the benefit of the nurses.

Debut Means Service

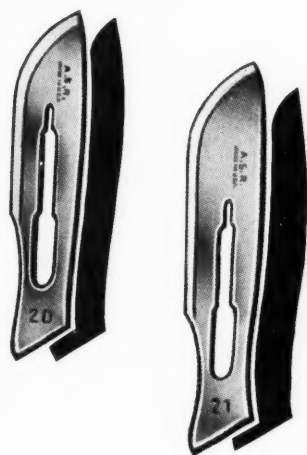
• In Montreal girls making their debut into society mark the occasion by giving a prescribed amount of service to the out-patient department or the patients' library of one of the large hospitals.

Their Contribution \$4300

• The sum of \$4300 was contributed during the year 1941 by the women's auxiliary of Evanston Hospital, Evanston, Ill. This was used to complete the soundproofing program previously undertaken and to pay for free care given to certain patients unable to finance their hospitalization. It is interesting to note that the Memorial Fund alone contributed nearly \$1500, which was accumulated from small gifts from those who wished to pay tribute to the deceased in this manner instead of sending flowers.

Other services rendered by the auxiliary included furnishing transportation for clinic patients, servicing the patients' library, awarding scholarship funds for graduates of the school of nursing, preparing bandages, arranging flowers in the hospital lobby, providing clerical service in the out-patient department and assisting in occupational therapy projects for hospital patients. Mrs. Carol W. Alton, president of the auxiliary, has been elected to the hospital board.

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The New Trustee Needs Help

STEPHEN MANHEIMER, M.D.

Director, Mount Sinai Hospital, Chicago

NEWLY elected trustees who have had no experience in hospital work are naturally bewildered by the uncommon nature of the undertaking and more frequently than not become even more bewildered by the complexity of problems they encounter at their first board meeting. Unless they are encouraged at the outset, this initial experience often will alter the course of the new trustees' work and will limit their usefulness and capacity to serve.

Hospital trustees, like other persons, differ in their personalities, in their interests and in their talents. One veteran board member who is direct in his way of speaking classifies trustees as "workers and non-workers, rich and not rich" and goes on to say that, whatever their classification, their value to the institution will depend in a large measure on their willingness to learn and to cooperate with the administration.

The Administrator's Part

How well the new trustee develops depends a great deal on the cooperation the administrator can give him. We have heard of the hidebound trustee who measures hospital efficiency by the dollar sign, who overlooks the scientific and therapeutic achievements. There is also the hypersensitive administrator who regards the new trustee's enthusiastic activities in the hospital and among the personnel as an encroachment upon his authority. Administrators should rise above such pettiness. The tactful manner in which they meet such a situation is a measure of their administrative maturity.

Most trustees come from the ranks of business or the professions. Indubitably each one has a fine knowledge of at least one phase of hospital work and can contribute much toward that phase. The board's job should be to discover these potential interests, nurse them into full vigor and put them to pragmatic use.

Trustees generally enter upon their membership on the board with enthusiasm and with the resolution to contribute their time and energies, and frequently their money, to the needs of the hospital. Unless the hospital offers a sympathetic outlet for these enthusiasms, the new member will soon become apathetic.

Formal courses of instruction have been conducted for trustees, institutes organized for their benefit and latterly much has been published in hospital journals to interest them. Undoubtedly, these are useful adjuncts for developing good trustees and help lay the foundation on which hospital administrators can build. However, in the last analysis it is the administrator who can keep their interest and enthusiasm alive and can direct these into useful channels by frequent contacts and informal chats.

The new trustee cannot be left to his own resources with the hope that he will find his niche in the hospital organization. The president of the hospital or the administrator should explain the underlying philosophy of hospital service and the particular objective and purpose of the specific hospital. He should be made familiar with the broad aspects of hospital policies and not harassed with minute details which should concern only the paid hospital personnel.

The philanthropic nature of hospital service to the sick and needy is taken for granted, but this does not mean that its business affairs may be conducted on anything but the most efficient plane. In management, purchasing and personnel practices the hospital should be conducted on the most advanced business principles. Discipline must not lag and authority and responsibility cannot be divided. Hospital jobs are not to be regarded as sinecures which trustees

may distribute to their favorites or by which they may reward a superannuated servant.

The administrator should present hospital problems to the board members and invite their criticism, but the new trustee should be informed that the administrator's office is the center around which the activities of the institution revolve. All communications, comments and criticisms should be directed to the administrator and not taken up with individual department heads or other members of the personnel. This does not mean that the department heads may not be consulted, but for the sake of efficiency and effective organization this should be done in the administrator's office and in his presence. Moreover, interest can be added to board meetings by inviting department heads occasionally to present five or ten minute talks on the work of their departments.

Memos Aid Orientation

Because of the complex nature of hospital work the period of introduction to the institution may be long and tedious. Regular and periodic communications sent by the administrator to the board members on various phases of the work or analyses of departmental functions not only will keep the new trustee's interest from flagging but will serve to keep him enlightened. However, willingness to be informed and willingness to apply the same logic and intelligence to hospital problems as to his business are not the sole requirements. The new trustee should be ready to appropriate an adequate amount of his time to his new duties.

It is not always the knowledge that is lacking but it is the willingness for performance that lags. Here, again, the hospital president and the administrator can help by assigning the new trustee to those committees

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Four great laboratories are located in New York, Illinois, California, and Ontario. They provide assurance that the usual prompt deliveries of Baxter intravenous solutions, and equipment for transfusions, and for the preparation of plasma and serum, will not be interrupted by untoward accidents. Adequate provision has already been made to handle defense requirements and increasingly greater demands by civilian hospitals

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CHICAGO NEW YORK ★

in which he has some interest and which deal with problems with which he has at least a nodding acquaintance. Yet, committees should not be formed merely as fixtures in which trustees may be pigeonholed; they should be active, live bodies. New trustees should not be encouraged to do a piece of work, render a report and have the report remain unused. That is like building a springboard from which no one ever leaps; it acts as a deterrent for future work.

The choice of a new trustee should be carefully studied. Unless due consideration is given to selecting the proper person, the process of development and training may go for naught. While the present tendency is to have the personnel of hospital boards represent a cross-section of the community, it is advisable to select a person who has the respect of the community and is compatible with the other board members, one who can work harmoniously with

them, who makes for congeniality and, above all, one who does not have to be inoculated with the virus of enthusiasm but who has a genuine desire to serve.

Finally, advantage should be taken of the rôle the medical staff may play in the new trustee's development. In company with other trustees, the new man should meet informally with members of the medical staff, should get to know them and should exchange views and discuss problems of professional interest dealing with the hospital with them. Such informal get-togethers will broaden his horizon, give him better insight into the board's deliberations and afford him good preparation for contributing to discussions at the scheduled joint committee meetings.

It is remarkable how much better work can be accomplished by committees and what better feeling can be engendered when the participants know one another and are acquainted with all the problems.

From a President's Desk

RAYMOND P. SLOAN

IT IS indeed a beautiful room into which the board president's secretary is ushering us, wood paneling and all the trimmings. There he is seated at his large mahogany desk. How can he do any work and have a desk that looks like that—not a paper in sight? But that's not what we would question him about. We came to inquire what he expects of his hospital administrator.

"Introverts have no place in hospital management," he begins. "Outside contacts are essential for everyone, department heads as well as the administrator.

"I expect my administrator to keep me posted not merely on the finances of the institution but also on the broader phases of hospital work. I want him to answer my question, 'Why am I a trustee?' by giving me an opportunity to prove myself. I want him to answer my question, 'Why the voluntary hospital?'"

"Right now I want to know about group insurance. What about the ward plan, with medical service as

well as hospital service provided? Where is this leading and how will it affect not only my own institution but other hospitals as well?

"I want to know about any possible federal appropriation to voluntary hospitals for expansion in proportion to defense activities or to nursing schools that can prove increased enrollment. Lots of things are happening in Washington today that are affecting hospitals. I want to be kept posted. I believe it's my job. I believe it's part of the administrator's job to supply that information. The same holds true of any legislation affecting our hospitals.

"I want to know of new developments in medicine as they may affect hospital service. If a new type of anesthesia is being offered that requires a different setup or the organization of a special department, perhaps with a doctor in charge, I want to know it. On whom else can I depend for a correct interpretation of new standards if not my administrator?"

"I expect him to regard me as I do him, a partner in an enterprise

involving staggering sums. In my own business the money is my own to gamble with if I choose. But hospital money belongs to the community; it is a public trust for which we are responsible. Furthermore, the commodity in which we are dealing is life, human life, and we can't afford to gamble.

"I expect my administrator to be frank with me at all times. If I stop in to see him without any notification and find him tied up, it serves me right. Why should I expect him to leave whatever he's doing and rush out apologetically just because I happen to be a trustee? He happens to be an executive, the executive of an organization involving considerably more capital and with more complexities than my own.

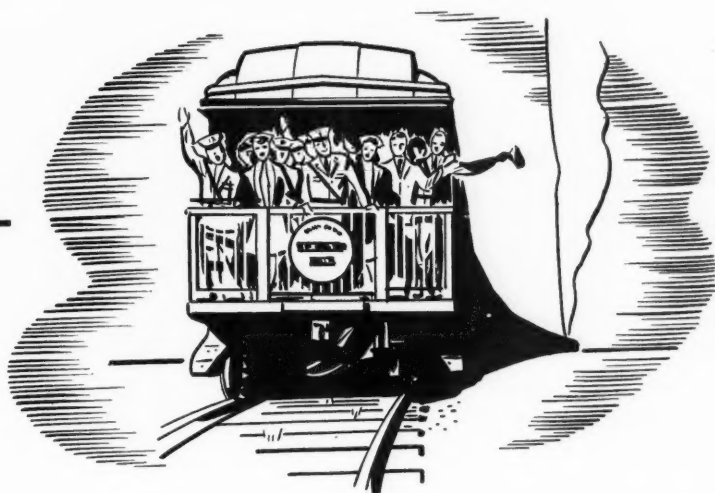
"I expect the relationship between the administrator and every trustee to be sufficiently informal to permit him to feel free to telephone any board member and say: 'May I stop in at your office sometime today and ask your advice on a certain matter?' And I expect the trustee to reply, 'Sure, join me for lunch if you can.' That's the way we do it in business. Why need hospital affairs be conducted differently? The closer the contact between trustees and administrator the better. It's the only way we can learn.

"I haven't much time for reading. Who has, these days? But I would appreciate being advised of any articles appearing in magazines, professional or otherwise, that would help me and would clarify my mind as to my own precise functions. I want my administrator to guide me.

"Finally, I believe in the apprentice system. There's nothing like learning under a good master. Today we're too impatient. The young lawyer must be taken into partnership overnight. The young actor with one good performance to his credit demands that his name appear in incandescents. Yes, and the young hospital administrator, after a scant initiation in his profession, applies confidently for big hospital responsibilities. There is some knowledge that comes only by constant, daily contacts with life. We must take time to practice our theories, to study them in their application to everyday problems, before we can attain mature judgment and turn in a skillful, well-balanced performance."

From a talk delivered before the New York Institute for Hospital Administrators, Oct. 20, 1941.

SURGERY IS ON THE JOB... AT HOME AND AT THE FRONT



FAMOUS LAKESIDE UNIT CALLED TO THE COLORS

RECENTLY, a train pulled out of Cleveland. The *Lakeside Unit* was on its way again—destination unknown. This was the same unit that, in World War I, was the first detachment of the American Expeditionary Forces to carry the Stars and Stripes into service overseas, the Fourth General Hospital of the U. S. Army.

As before, when distinguished surgical and medical men led this organization to its trying tasks at Rouen, France, the present embarkment saw many prominent names among the list of 54 officers—professional men who are willing to sacrifice their practices, perhaps their

most active years and even their very lives to the cause of world freedom.

That is the true spirit of the profession—of those who go and those who must stay at home. For, the battle to make and keep ours a strong, sturdy, healthy people is a two-front battle.

★ ★ ★

It is to be ready for whatever demands the profession may make upon us that the lights burn longer in Miller laboratories and plants. Here, those surgeons gloves that are so sensitively thin yet so protectingly tough are being produced as usual, as are tubing, water bottles, throat collars, ice caps and other Miller surgical supplies. *Yes—Miller too, has answered the call to the colors.*



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Plant Operation and Maintenance

CONDUCTED BY W. W. DAVISON AND R. STARR PARKER

A Functional Floor Surface

P. W. JENKINS

Industrial Fellow, Mellon Institute

ROBERTSON hubbellite is a cement formed by the reaction of finely divided copper in a gel of other metallic salts and oxides. The more than a trillion particles of metallic copper contained in each pound of hubbellite behave in a manner similar to a copper roof exposed to sea spray: they are converted (in the cement) to a blue-green phase that x-ray studies show to be a synthetic counterpart of the natural mineral atacamite, a copper hydroxychloride. The uniquely valuable properties of the cement come from this copper compound.

If a floor of hubbellite is washed or otherwise dampened with water, minute traces of the copper compound (3 or 4 parts in ten million) are released. This very small amount is adequate to exert a marked sanitizing effect through oligodynamic action; yet it is such an infinitesimal part of the total quantity of the com-

pound in the cement that no influential depletion can be found after years of daily washing.

There have been many practical indications that a hubbellite surface is discouraging to bacterial and mold growth. This interesting characteristic was first observed six years ago but was not announced until recently because it was thought such a property of a floor surface, noticeable even in the presence of a normal burden of soil and regeneratable simply by washing, has such an important relation to the maintenance of health that the cement should be submitted to authoritative bacteriologists for independent study and evaluation. These investigations, arranged for as soon as possible, have lately been completed and will now be summarized.

Dr. W. L. Mallmann, who directed a broad study of hubbellite at Michigan State College, has made the fol-

lowing statements in his report (J.A.M.A. 117:844):

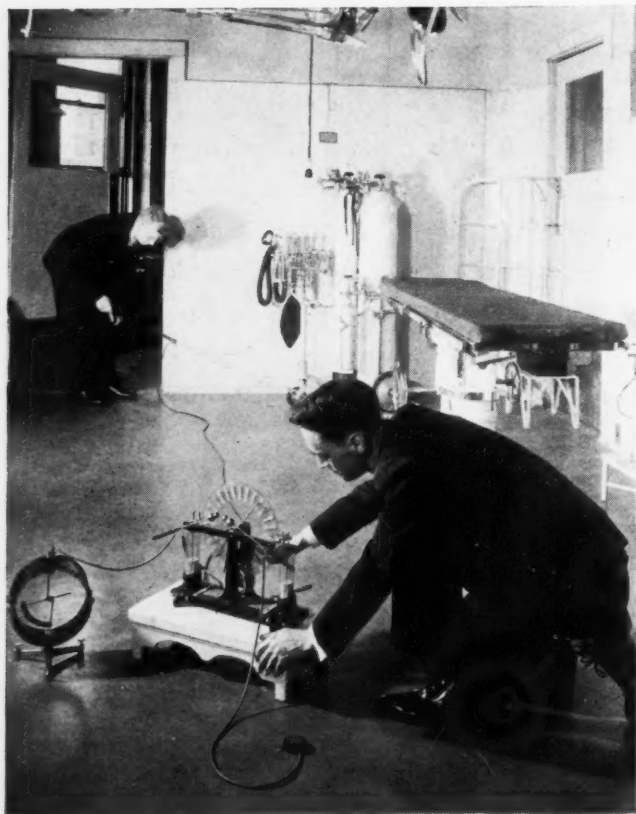
"That floors properly cleaned each night may carry large numbers of bacteria is demonstrated. . . . The bacterial population ranged from a minimum of 1,480,000 to a maximum of 7,490,000 with an average of 4,167,000 bacteria.

"The number of bacteria on an apparently clean floor shows the inadequacy of terminal disinfection of floor surfaces as a means of foot-infection prophylaxis. There is plainly a need of a method of concurrent disinfection of the floor so that during use the floor surfaces exhibit an antiseptic or disinfectant action.

"Fragments of a floor covering called hubbellite introduced into water or broth suspensions of bacteria, yeasts and molds produced lethal effects. When bacteria and molds were smeared on hubbellite tiles in the absence or presence of organic matter, lethal effects were obtained. Under comparative conditions, a hubbellite floor showed lower bacteria and mold counts than ordinary concrete floors. Epidermophyton interdigitale was isolated from ordinary concrete floors in the hallway of a locker room but not from the hubbellite floor. The use of hubbellite floors is an aid in the control of floor-borne infections of the feet."

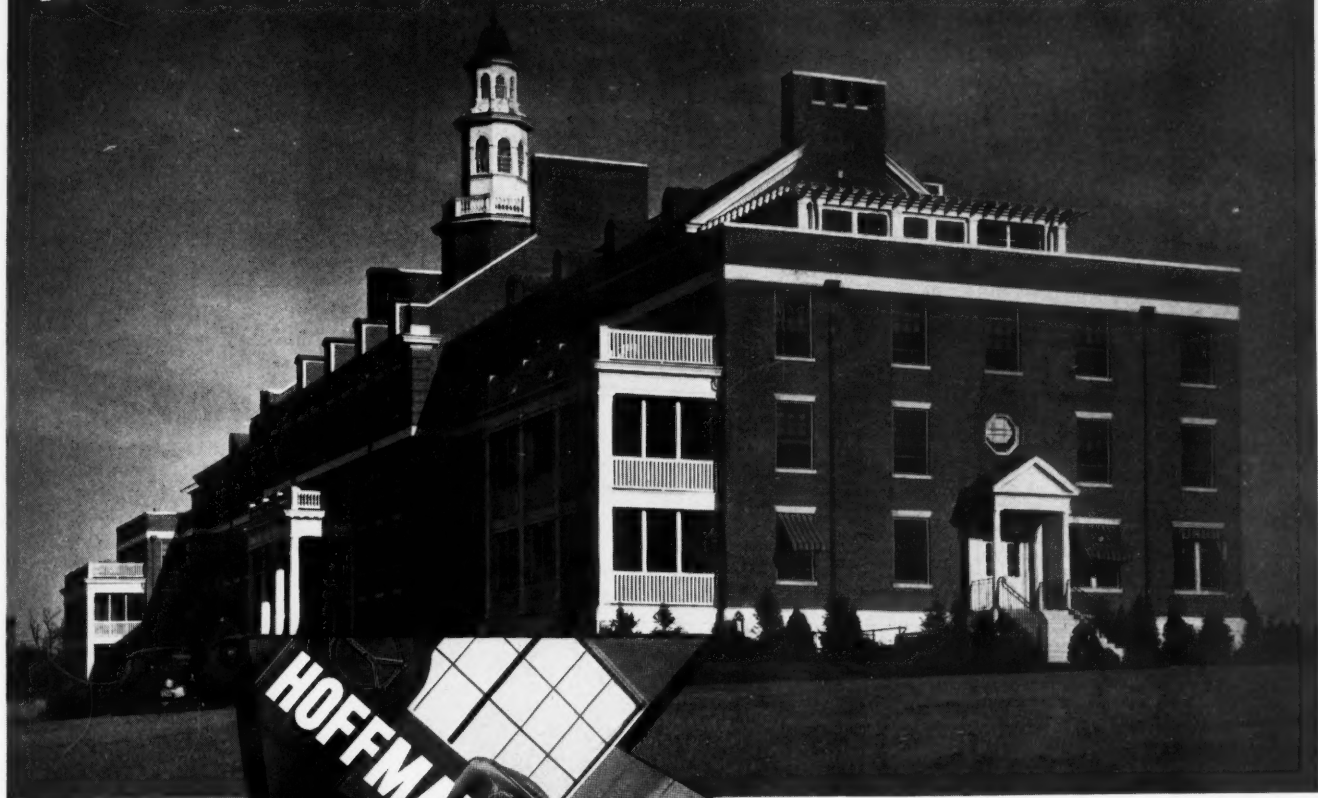
Another research carried out at Pennsylvania State College under the supervision of Dr. M. A. Farrell was described in *Industrial and Engineering Chemistry* 33:1185 (Sept.) 1941.

"This study reports the action of cupric oxychloride cement, hubbellite, on the growth of eight mold and 18 bacterial cultures representing micro-organisms associated with various skin infections, such as athlete's foot and ringworm, as well as



A test in progress at St. Francis Hospital, Pittsburgh, demonstrates the conductivity of the floor surface in the operating room.

AT ROOSEVELT HOSPITAL, METUCHEN, N. J.



AYLIN PIERSON, ARCHITECT

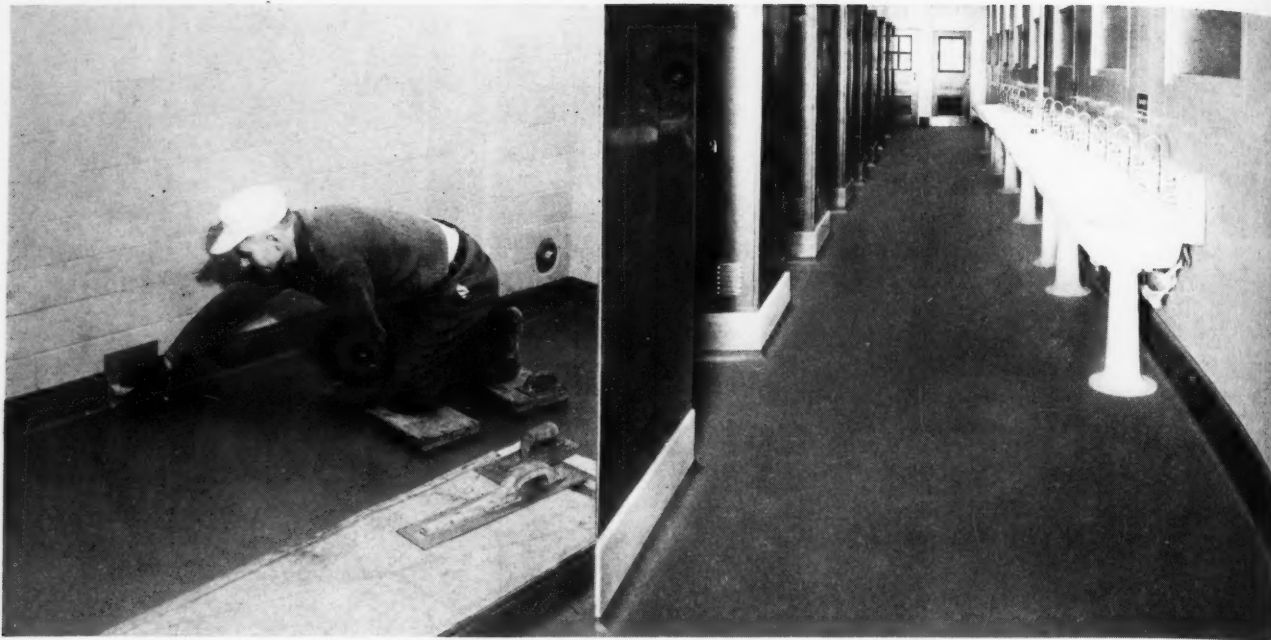
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bacteria of different chemical compositions.

"Cupric oxychloride cement brings about a marked reduction in the number of bacterial cells within a fifteen minute interval; the growth of all the mold cultures was completely inhibited within this period. Covering the cement with dirt or washing with water for six hours did not diminish the antiseptic properties. Similar results were obtained with this cement under actual service conditions over a six month test period. Throughout the study cupric oxychloride cement had a marked antiseptic effect on the mold cultures, while the growth of bacteria was influenced to a less marked degree."

The results of these investigations are of importance to the modern hospital. When the usual floor surface is scrubbed with a disinfectant, it, like one's hands, immediately begins to acquire another burden of micro-organisms and its cleanliness depends upon how well and how recently it has been disinfected. In contrast, hubbellite used as a floor surface requires only water for rendering available its active ingredient and, hence, needs only to be kept reasonably clean by washing.

In operating rooms and in other places where every precaution must be taken against infection, it is obvious that other sanitational means should be continued, with the cement serving as a "mopper up," particularly in the out-of-the-way places that are not reached by a disinfectant. But there are many floor areas in a

hospital where adequate disinfection is not always provided and in such parts the cement can reduce the spread of contagious skin diseases.

It is especially useful in shower and locker rooms and wherever people walk in bare feet. It can cut down mal-odor in toilets and contamination in food preparation rooms. In general, it can raise the sanitational standards of the whole building to a plane that is more in keeping with the operating rooms.

Hubbellite is also interesting from the standpoint of its physical properties, described by Dean S. Hubbell in *Industrial and Engineering Chemistry*. Its remarkable adhesiveness imparts toughness (high strength with flexibility) to the flooring compositions made from it; this quality enables it to be troweled in place in relatively thin layers ($\frac{3}{8}$ inch) over wood or concrete subfloors in large unbroken areas and brings about freedom from dusting and ease underfoot. The cement is volume constant and, more important, the strength of its bond to the subfloor is so much greater than the force required to produce "cold flow" or self-adjustment that it readily conforms to the base to which it is applied.

Acids and alkalis cause damage to hubbellite, but the cement is resistant to water, oils, organic solvents, cooking fats, sugar and certain other substances that ordinarily cause floor problems. The electrical conductivity of this cement lies between that of a conductor and of a good di-

electric. Thus, while it is sufficiently conducting to prevent the build-up of static to potentials that can cause a spark, it will not conduct the relatively lower voltages encountered in power and lighting circuits.

In the opinion of many specialists who are concerned with static safety, too good electrical conductivity of floor surfaces should be avoided because it introduces the hazard of sparks and shocks from ordinary lighting circuits unless costly and elaborate provisions are made in supply lines and appliances.

A hubbellite floor is ordinarily installed in a single application and the color extends throughout its thickness. Cove bases and border may be in another color, if desired. Such a floor is not represented as beautiful, though its appearance is attractive. The cement is well suited for resurfacing old floors, because it bonds to most slabs that are properly cleaned and roughened and because it adds but little in thickness or weight to existing floors.

Hubbellite provides a functional floor surface to meet specific service conditions. It is not recommended where appearance is the only concern or where a cheap type of floor covering will serve. But, because it aids in the maintenance of sanitary conditions, is spark safe, resistant to cooking fats, sugars and many other food wastes and is nondusting and easy underfoot, it has demonstrated its service worth under many of the conditions found in the modern hospital.

STAINLESS STEEL and YOU

ELKAY "STURDIBILT"



METAL PRODUCTS

ELKAY MANUFACTURING COMPANY

4704-4714 ARTHINGTON STREET
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A "Sturdibilt" Letter
from ELKAY
to YOU

The time has come when I must tell you about the Stainless Steel situation as it affects the manufacture of ELKAY "Sturdibilt" cabinet sinks and tops and other equipment for hospitals, institutions, industrial plants and homes.


As you perhaps know, chromium and nickel play an important part in the manufacture of stainless steel. But our Government now needs ALL of these two essential metals in the production of armament and other necessary war equipment.

We, here at ELKAY, are justifiably proud of the fact that we were selected as one of the firms to supply our Government with some of the essential stainless steel equipment which, because of its stain, acid and rust resisting qualities, assures the utmost in sanitary protection to our men in the service. And we are happy too, that we had the facilities, the equipment, the man power and the experience which enable us to contribute our share to our Government's successful prosecution of the war.

This means that for the duration, we will be unable to supply you and our many other customers with ELKAY "Sturdibilt" stainless steel equipment, without priority.

May I express the hope that it will be our pleasure and privilege to serve you again when our men have finished their job - over there - and that this day may not be far off.

Yours for a Glorious Victory


L. KATZ, President
ELKAY MANUFACTURING CO.

CO-OPERATION WILL WIN THIS WAR

Engineers' Question Box

Fire Drills

Question 1: What are the duties of the hospital engineering department in case of fire or fire alarm? How often should fire drills be held?

ANSWER: The duties of the engineering department in case of fire are varied and depend a great deal on the size of the hospital and of the engineering staff. The chief engineer or senior engineer on duty should be notified of any fire, odor of burning or presence of smoke. He should report to the location of the fire and determine if the fire can be handled by the hospital crew or if the city fire department should be called; he should then take active charge of fighting the fire until it is extinguished or until the city fire department arrives. The other engineers on duty should take stations at the fire pump, elevators and main and emergency switchboards, prepared for any emergency. Other male employees should report to their stations and perform their duties as listed in the rules for fire.

The engineering and housekeeping department employees should hold a fire drill every six months and the entire hospital staff should participate at least once a year.—W. W. DAVISON, *Passavant Memorial Hospital, Chicago.*

Economizer in Incinerator

Question 2: Is it economically feasible to use an economizer on the incinerator to heat water? Is it necessary to have auxiliary fuel in order to do this?

ANSWER: I doubt that it is feasible to use an economizer in the incinerator of the average hospital. If the institution is large enough to have plenty of rubbish and garbage to keep the incinerator going most of the day and to keep the fire box and combustion chamber hot enough, an economizer might be used to preheat the hot water. In most incinerators it is necessary to use an auxiliary fuel of some kind—either gas, oil or coal—to help burn wet garbage but it would not be economical to use this auxiliary heat to raise the temperature of the water through the economizer.—W. W. DAVISON.

Inspecting Elevator Cables

Question 6: Who determines (and on what basis) how often elevator cables should be replaced?—R.E., N.Y.

ANSWER: Determination is by local building department inspectors and state inspectors. The insurance com-

panies may inspect independently or may accept the findings of the city and state inspectors.

Inspection is based on number of broken strands, condition of lubrication of cable and amount of internal failure and distortion of cable. Cables should be inspected weekly by the hospital maintenance crew and quarterly by city, state or insurance inspectors.

A handbook entitled "American Recommended Practice for the Inspection of Elevators," issued in July 1937 and approved by the American Standards Association, is an excellent source of reference and guidance.—J. B. BASIL, *architect, Brooklyn, N. Y.*

Frequency of Inspection

Question 7: How often should the various parts of elevator equipment be inspected by the hospital engineering department? By the insurance inspector? By city or state inspector?—E.S.G., Colo.

ANSWER: Most insurance companies inspect elevators covered by their pol-

icies every three months. State and city inspection laws and ordinances call for either annual or, more frequently, semi-annual inspection.

For proper, trouble-free operation, the hospital engineering department that maintains its own elevators will spend from three to five man hours per elevator per week inspecting, oiling, adjusting and maintaining the elevators.

Naturally schedules vary with every installation, but a good inspection program, whether by an elevator service company or by the hospital maintenance department, usually calls for daily inspection of all elevator doors, control and operating panel contacts, signal contacts, leveling devices, floor selectors and bearings. Door interlocks, door operating devices, engines and generators require weekly inspection, while hatchway equipment, cables, counterweights, limit switches, pit bumpers, guide shoes or rollers and slack cable devices need to be checked at least once a month.—STARR PARKER, *St. Luke's Hospital, Cleveland.*

PRIZES FOR BEST ANSWERS

A \$5 prize is offered for the best answer printed each month to questions that have appeared in the Engineers' Question Box. The first prize went to Leland J. Mamer, engineer, Evanston Hospital, Evanston, Ill., for his answer to question 3 in the January issue. The award was based on accuracy, completeness, pertinence and presentation. The judges (Mr. Davison and Mr. Parker), who, incidentally, are not eligible for prizes, also commended Mr. Herzog's answer to this question.

Whether or not Mr. Mamer is establishing a precedent we do not know, but he wrote us after receiving the prize that he was using part of it to enter a personal subscription to *The Modern Hospital*. Perhaps he has an eye to future prizes.

Why don't you help out your fellow engineers and hospital plant workers by mailing in answers to one or more of the following questions? The best answers submitted will be published next month or in a later issue. Your answer may win the prize. If you are not satisfied with answers to earlier questions, send in your own answers.

Send in your questions, too, on problems that are bothering you. Address questions and answers to Department of Plant Operation, *The Modern Hospital*, 919 North Michigan Avenue, Chicago.

11. Under what circumstances can explosions result from the use of oxygen? When can fires occur?—A.C.M., Ore.
12. How does the average 100 bed hospital determine the cost of electricity per day for lights, laundry and food department? We operate our own laundry, which is not on a separate meter.—F.R., Ark.
13. What is the value of retaining moisture in a patient's room? Does the pan of water on the radiator offer any advantages in maintaining humidity?—G.B., Ky.
14. How often and by what method should the fire hose and standpipe connections in a hospital be checked?—R.C., Utah.
15. How should a fire hose be cared for after it has been used?—R.C., Utah.



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The ONLY specially designed Blood Bank. Revolving shelves put desired bottle at your finger tips. Accurate temperature control. Two sizes: 80 and 180 bottles of 500 C.C. or 60 and 150 bottles of 1000 C.C. capacity. Immediate delivery.

● Now large and small hospitals can afford Blood Plasma low temperature refrigerators. Simple, practical design... no expensive gadgets... low price... low operating cost.

Their specialized design is the result of years of Jewett experience in clinical needs.

They provide quick freezing, and operate at 0° F. to -10° F. (-18° C. to -23° C.), which is well below the maximum allowable temperature.

Self-contained, sealed unit assures quiet, trouble-free operation. Special mountings reduce vibration to vanishing point.

Single lid gives instant access to interior. Durable, metallic finish. Sanitary interior walls are hot tin dipped.

Model 6-A holds 240 bottles of 300 c.c. capacity.

Model 3-A holds 120 bottles of 300 c.c. capacity.

Write for Low Prices...giving desired size.

JEWETT ICE CUBE MAKERS

Provide step-saving convenience of plenty of ice cubes on every floor. Makes 42 pounds of ice cubes every 20 hours and stores equal quantity for immediate use. (Total 84 lbs.) Compact, self-contained, ready to use, low price, low current cost.

ARCTIC TRUNK SAVES FROSTED FOODS

Save money by buying commercially frozen food at case lot and "Bargain Special" prices. 3 and 6 cu. ft. models complete with sealed trouble-free compressor ready to plug in. Low prices... Model 3-A holds 120 lbs. of frosted foods, Model 6-A holds 240 lbs... write, stating size.



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SEE HOSPITAL YEAR BOOK PAGE 219 FOR COMPLETE LINE OF BLOOD BANK, BLOOD PLASMA, MORTUARY REFRIGERATORS, ICE CUBE MAKERS, AND CRACKED ICE STORAGE CABINETS. MAIL POSTCARD INSERTED IN YEAR BOOK FOR COMPLETE DETAILS.

HOUSEKEEPING PROCEDURES

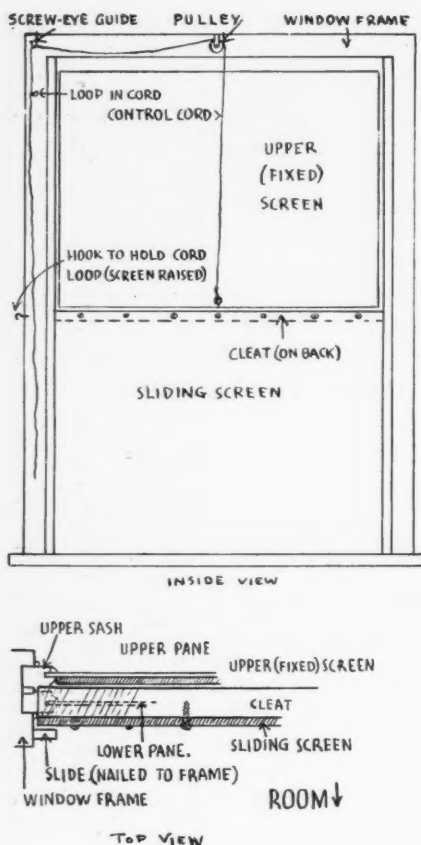
Conducted by Alta M. LaBelle

HOUSEKEEPING is playing an important rôle in the defense preparations that are under way at Michael Reese Hospital in Chicago. In accordance with the general plans set up by Dr. Herman Smith, the director, the housekeeping and engineering departments work in such close collaboration that it is difficult to determine where the activities of one end and those of the other begin.

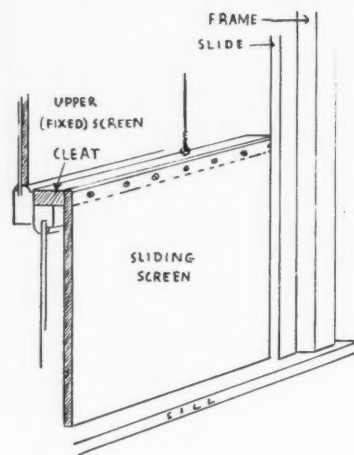
One of the foremost problems encountered was that of blacking out

skylights dull black and the inside the color of the rooms.

The "A.R.P." shutter was the result of much thought and planning by the engineering and housekeeping departments. As it was finally worked out, the device operates as shown in the accompanying illustration. The glass of the upper sash is permanently covered with plaster board. The lower section of the window is covered with a sliding panel of the plaster board which runs on tracks extending to the top of the window frame. A length of window cord is fastened to a screw eye in the top center of the panel and is connected with a pulley at the top of the window, running across the top of the window and down the side where it is held by a hook. Removing the cord from this hook releases the panel



Left: Diagram showing inside and top views of "A.R.P." shutter devised for use at Michael Reese Hospital, Chicago. Below: Diagram showing sliding screen in blackout position.



the various units of the institution; several experiments have been made to discover the most suitable method for each. Certain areas, such as labor rooms, nurseries, corridor ends, open stairwells and the front office, in which illumination is essential at all times, are being equipped with "A.R.P." shutters that allow circulation of light and air under normal circumstances but permit the windows to be blacked out at a moment's notice.

Inasmuch as the operating rooms are air conditioned, it was considered feasible to black them out permanently by painting the outside of windows and

so that it slips down into position. The panel is also provided with a 2 inch width of board nailed across the back, which catches the lower sash as it slides down and automatically closes the window. Both the permanent covering of the upper sash and the sliding panel are painted dull black on the outside and room color on the inside.

Another method of blacking out was worked out for the fire doors located at the corridor ends in the private pavilion. These presented a special problem inasmuch as they are fitted with glass panels on either side and a large arched transom above. The transoms

have been covered with arched cornices of plaster board and the doors and windows have been protected by means of heavy, double-faced sateen draperies that extend from wall to wall. The draperies are rigged with a pulley cord and can be opened or closed by one quick pull on the cord. The material is designed to overlap 3 inches in the center to prevent the escape of light.

Determining the possibilities of expanding the hospital's bed capacity in case of need was another duty assigned to the housekeeping department. A survey was made of existing facilities and every available space that could be utilized for extra beds was charted. In the event of a large influx of casualties, it will be the duty of the housekeeping department to set up extra beds in the locations specified. Every bed and cot in the hospital that is not now in use has been accounted for and as the program develops these will be stored in strategic positions near the areas in which they are to be set up.

Every member of the housekeeping personnel is being thoroughly instructed in the procedure that is to be followed during an air raid alarm. Maids, cleaners and housemen who are on duty at the time have been instructed to stay where they are when the alarm is given or, if it is possible, to go to some prearranged shelter that they can reach quickly and with a minimum of confusion. They have also been cautioned against attempting to use the stairways during a blackout so that they will not create a traffic problem. Duty room maids will be responsible for turning off steam tables, gas and electricity as soon as the alarm is sounded.

Plans have also been made for assembling the members of the housekeeping staff quickly in case their services are needed to help care for casualties. A list of all employees who can get to the hospital on short notice, if they are not already on the premises, is kept in the housekeeping office. Each employee has been given a list of the duties that he will be expected to perform. In such an emergency, the housekeeping department will be kept informed by the admitting officer of the probable number of patients that is coming in so that the approximate number of beds that must be set up and their location will be known. Housekeeping maids will be sent wherever their services are most needed.

Although some of these plans are not finally completed and there are still some kinks to be straightened out, Michael Reese will be ready for trouble—if and when it comes.—ALTA M. LABELLE, housekeeping director, Michael Reese Hospital, Chicago.

**EVEN ON READY-TO-EAT CEREALS
WE LEAVE NOTHING TO CHANCE—**



says

**ERMA
GREIG**

B. S., Dietitian



**THAT'S WHY
CHICAGO'S GREAT
WOMEN
AND CHILDREN'S
HOSPITAL
SERVES
KELLOGG'S
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CHOICE OF—**

Kellogg's CEREALS
MADE IN BATTLE CREEK



Equipping a Nutrition Laboratory



IRENE L. WILLSON

Head Dietitian
Shadyside Hospital, Pittsburgh

In each cabinet are the usual two drawers with cupboards below. The contents of the cupboard drawer are listed.

The sinks have a swinging faucet, lift-off soap dish and hose with spray for rinsing dishes; underneath the sink there is a three bar chromium plated sliding towel rack. Stoves have an oven, broiler and four burners. The refrigerator is large enough to accommodate salads, desserts and supplies needing refrigeration.

A small hand sink is conveniently

A NEW nutrition laboratory! How thrilling these words sound to a dietitian who has been using antiquated equipment for teaching dietetics! Once the space is available, what to put in the laboratory becomes the most important problem.

First of all, we want an attractive room that resembles a kitchen in a home. So we decide to use the unit system of equipment with each unit like a small apartment kitchen, consisting of a sink, a kitchen cabinet, efficiency stove and sufficient working space.

Upon investigation we learn that a firm sets up at the factory the unit, complete with stove. However, at Shadyside Hospital, Pittsburgh, we were fortunate enough to have a board member who wished to donate the ranges, so we turned our attention to a combination sink and kitchen cabinet that would combine well with the small efficiency apartment range.

Fifteen is a convenient number to have in class and we decided that three could work together in one unit so that five units would be needed. Our floor space required us to set up the units around the wall leaving space for an instructor's desk or table and a blackboard.

EQUIPMENT PROVIDED EACH WORKING UNIT

EACH CABINET DRAWER

- 1 egg beater
- 1 spatula
- 2 wooden spoons
- 2 tablespoons
- 2 teaspoons
- 2 knives
- 1 paring knife
- 1 set measuring spoons
- 1 small strainer
- 1 lemon juice squeezer
- 1 small tray
- 1 lid for skillets and saucepans
- 2 measuring cups
- 1 utility set consisting of fork, knife and spoon

EACH CUPBOARD

- 1 double boiler
- 1 large strainer
- 1 skillet
- 2 saucepans: 1 large and 1 small
- 2 bowls
- 1 flour sifter
- 1 rolling pin

WALL CASES

- 3 dozen sherbets
- 4 dozen small glasses
- 4 dozen large glasses
- 2 can openers
- 2 dozen cups
- 2 dozen dinner plates
- 4 dozen salad plates
- 1 dozen saucers

KITCHENS IN NURSES' HOME

- 8 plates, 7 $\frac{1}{4}$ inches
- 8 cups, 7 ounces
- 1 platter, 11 $\frac{3}{4}$ inches
- 8 saucers, 7 ounces
- 1 platter, 13 inches
- 2 bakers, 9 $\frac{3}{4}$ inches
- 12 teaspoons, stainless metal
- 2 tablespoons, stainless metal
- 12 dinner forks, stainless metal
- 12 dinner knives, stainless metal
- 1 tea kettle
- 4 mixing bowls
- 3 refrigerator dishes with covers
- 2 cans to store supplies: cocoa, 2 pounds; sugar, 10 pounds
- 1 Ladd egg beater
- 1 No. 1 bread box
- 1 wooden spoon
- 1 paring knife
- 1 aluminum measuring cup
- 1 coffee pot, glass
- 1 juice extractor, glass
- 1 No. 36 garbage can
- 1 saucepan and cover, cast aluminum
- 2 saucepans and covers
- 1 utility knife and fork

AUDITORIUM CUPBOARDS

- 144 punch cups
- 2 large punch bowls
- 2 punch ladles
- 144 cups and luncheon plates
- 144 teaspoons
- 144 dessert forks

placed in the kitchen. Cabinet tops, drain boards and splashes are made of stainless steel.

In one set of wall cases in which we have a supply of sherbets, glasses and a dinner service for 12, additional items consist of a set of cans for flour, coffee and tea, one bread box and one garbage can.

At first we planned to use a small gateleg table but we finally decided to use card tables for demonstration meals. The nurses enjoy the setting of the tables with the pretty dishes and silverware and sitting down to eat the meal that they themselves have prepared.

Stainless metal flatware with a solid back in a new pattern was purchased, not only for the laboratory but for the other kitchens in the nurses' home, which will be mentioned later.

The instructor's desk has drawers on either side with knee space and a stainless metal top so that it can be used as a demonstration table or as a repository for supplies.

A large sized blackboard with bulletin board space for showing illustrative material is provided. (We were so anxious to have enough display space that we planned also to have one of the new folding type of

blackboards. This was found unnecessary, however.)

In addition to the equipment purchased for our nutrition laboratory, each floor in the new nurses' home has a complete little kitchen including a sink, refrigerator, stove with broiler and oven, and plenty of cupboard space; these are of the same construction as those in the nutrition laboratory. A list of the equipment in each floor kitchen is given.

Then for the kitchen in the auditorium, we have a stove, sink, refrigerator and cupboards. The equipment for the auditorium cupboards is also listed.

FOOD FOR THOUGHT

From an Employees' Manual

• When you enter the hospital, the environment is entirely new and strange; adjustments must be made in your attitude and in your point of view, says the employees' manual of the department of dietetics, Vancouver General Hospital, Vancouver, B. C. Your personal feelings should be entirely removed from the people with whom you come in contact. You represent the department for which you work; be loyal to it and be courteous to the personnel of other departments.

Your hair must be neat and a net must be worn at all times; footwear should be suitable and neat, "not run down at the heels"; no jewelry is worn on duty; quiet must be observed in the hospital, do not talk or laugh loudly; no familiarity is allowed anywhere in the department among employees.

A strict system of rank is observed in the hospital; it is a form of formality your department expects you to help observe.

Here are some of the rules regarding conduct this dietetic department enforces:

1. Always rise when your own superior or the superior officer of any other department approaches or addresses you.
2. Always let your superior go ahead of you into elevators or through doorways; yield preference to anyone wearing a professional uniform.
3. Be prompt in carrying out orders and adhere strictly to time schedules in your work.
4. Discourtesy is never necessary and is inexcusable. Do not speak back to any person in white.
5. If you see something or hear something that you consider needs attention

or correction, report the matter to the head of your own department immediately but never discuss hospital affairs or affairs of your department outside the hospital. A hospital is like any small community in spreading gossip. Keep everything you hear to yourself, unless it is a matter for your department head; then tell it to her alone.

6. Loyalty to the hospital is inferred by your acceptance of a position here.

7. Common honesty in the use of hospital property means economy; willful waste or pilfering of hospital supplies means instant dismissal.

8. There is to be no eating in the ward kitchens. Anyone seen doing so must be reported at once and will be discharged.

9. Screens are to be kept closed at all times; kill flies as quickly as possible.

For Safety's Sake

• Dietary employees can help materially in reducing accidents. The employees' manual of the Vancouver General Hospital, Vancouver, B. C., also lists the following safety suggestions:

FLOORS: Keep free of grease and water; mop up spilled material at once.

SHELVES: Do not overload; place containers securely.

LIFTING: In handling heavy objects, lift with your legs, not the back.

VENTILATION: The kitchen must be kept from getting so hot that employees suffer from heat exhaustion but there must be no direct drafts that will cause hot food to cool.

CHAIRS AND STOOLS: Check daily for defects that may cause injury to those using them.

GARBAGE: Lids of cans must be kept shut and garbage removed frequently.

FIRE HAZARDS: Avoid accumulation of greasy rags and scrap materials.

FIRST AID: Insist on first-aid care of all cuts and bruises, regardless of how minor; serious injuries should be cared for by a doctor immediately.

KNIVES: Keep in one place when not in use; employees should know how to use them properly.

SHOES: Low heeled shoes for waitresses will prevent many slipping accidents.

COLLISIONS: Trays should be carried so that vision will be clear.

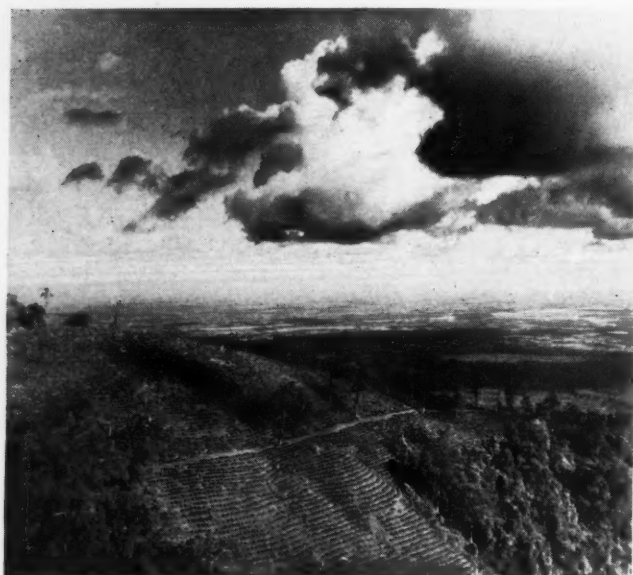
Speaking of Substitutes

• Use substitute materials whenever possible in place of material on the scarce list is the advice given by a well-known manufacturer of food service equipment. He recommends shelves of galvanized black iron, for example, to replace stainless steel, and properly finished black or galvanized pipe in place of brass plated or stainless steel pipe or tubing. For insulating materials cork should be avoided, and rock wool, glass wool or similar materials used instead. As stainless steel alloys become unobtainable, he believes it may be necessary to use porcelain sectional tops for steam tables and stoneware, china or porcelain enameled vegetable insets in place of stainless steel insets.

For urn liners, stoneware, china or glass liners may be necessary in place of stainless steel. Also it would be well to avoid the use of stainless steel for paneling, eliminating such paneling altogether when possible. Plywood panels may be used in place of metal panels and marsh tile in place of plastics. Most important of all, he urges, when preparing specifications for a new project be sure to consult with the manufacturers, discussing the specifications carefully to ascertain what materials are available and providing sufficient flexibility in the specifications.

Tea for Two—and More

FLORENCE S. VINCENT



On the slopes of India's Himalayas rolling tea plantations, such as the one pictured here, produce the world's finest tea.

SERVING tea as patients prefer it is a puzzle that the hospital dietitian finds almost insoluble. How to please six people anywhere, with anything, presents something of a problem. How then can one please 106 more or less querulous shut-ins, each with a personal opinion as to just what a cup of tea should be?

Often there are sound reasons for the average patient's failure to acknowledge what is set before him as the proverbial "cup of cheer." The first block to perfect tray service in the hospital is the doctor's habit of uncannily timing his visit precisely at mealtime. The tray, all set up for delivery, must be set aside until the doctor has made his rounds. On the moment his official white coat flicks out of sight, out comes the tray but by this time its contents are not what they once were, in spite of every attempt to keep them warm.

Then, too, the distance from diet kitchen to individual bedside varies with the length of the corridor. The cup of tea that is started off steaming may be satisfyingly hot when it arrives at the nearest destination. The cup to reach the last patient at the far end of the corridor, however, is likely to be lukewarm.

Then there is the question of blends and brands. It is an indisputable fact that tastes in tea differ. In all probability the cannisters on the hospital shelf are filled with a good brand of black tea. Logically so, since 80 per cent of all Americans

drink the black teas from India, Ceylon, Java and Sumatra. Yet, in the hospital as throughout the rest of the country, there is that small minority to be reckoned with. And the green tea addict is never satisfied with any but the green teas.

Should the brand and blend prove acceptable, the brewing may not be. Mrs. O'Brien may like tea strong; Mrs. Jones may like it weak. The husky he-man is certain to want his tea brewed from loose tea leaves, while the fragile and fastidious debutante may prefer the neat little tea bag. What is the poor dietary staff to do?

There is just one answer. Arrange an alliance between tea cup and pot of boiling hot water! And a choice between the brewing spoon for loose tea leaves and the tea bag. Then the patient who is able to sit up may brew his tea to suit his own taste and there will be no chance for complaint. This solution of the problem is not so difficult once the staff gets the boiling water complex and rushes tea tray from kitchen to bedside without delay. Patience and careful timing ought to turn the trick.

There are only three rules for making a good cup of tea:

1. Always use fresh bubbling boiling water and pour it while still at its bubbling boil on the tea leaves or tea bag. When water that has been previously boiled is used, the taste of the tea is flat. The air in the water has boiled out. A bubbling boil is

required because only bubbling hot water will bring out the best of the tea leaves. Merely hot water is not good enough. Something is missing.

2. Always use one teaspoonful of tea leaves per cup, plus one for the pot. There is no need to sacrifice the full flavor and effect of a cup of tea by using too little. Experimentation has proved that unless there is an allowance of a teaspoonful of tea per cup, plus the little bit more to make up the quota for the pot's extra spoonful, the result falls short of the full pick-me-up effect and of the essential oils necessary to give the tea rich flavor.

3. Steep the tea to any strength desired, preferably from three to five minutes. If one likes weak tea, probably the best plan is to let it steep from three to five minutes to get all the essential oils out of the tea and then to add hot water when serving. The steeping brings out the flavor.

The fact that tea may grow darker in the brewing does not mean that it is getting stronger. There are almost as many shades as there are types of tea. Some of them are deep; some are almost as colorless as water. It is impossible to tell how strong a cup of tea is by its color.

Tea that is to be served iced should be brewed full strength and poured boiling hot over the ice cubes, which will both dilute and chill it.

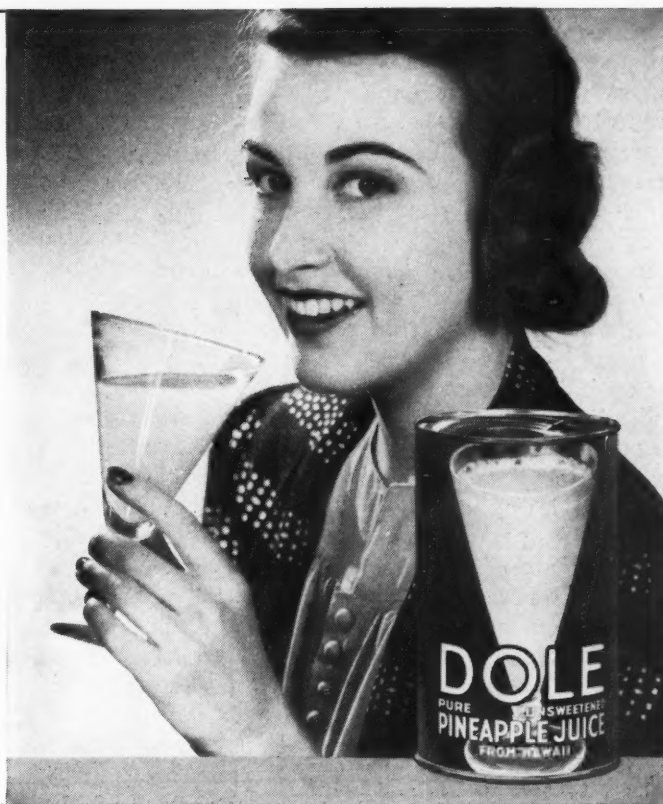
Iced tea, by the way, happens to be America's own invention and the national favorite hot weather cooler. It promises to remain so despite the claim of scientists that hot tea is actually more cooling than iced tea in the good old summer time. The scientist says that hot tea frees the body, through the pores, of about fifty times as much heat as it adds through its own heat. Its cooling effect is one of the reasons that tea is carried by tropical explorers.






With blend and brew taken care of, the problem of serving tea to please the individual patient is not yet entirely disposed of. Suppose the patient in private room No. 7 turns up her nose at milk or cream and clamors for lemon with a dash of ginger or a dab of jam? As one in a nation of rugged individualists, she

The Chart below

shows the daily recommendations of calories, vitamins B₁ and C, made by the Committee on Food and Nutrition of the National Research Council. It also shows the percentages of these nutrients contributed by a 6-oz. serving of Dole Hawaiian Pineapple Juice

FOR THE AVERAGE WOMAN



		CALORIES		VITAMINS			
				THIAMIN B ₁		ASCORBIC ACID C	
				Recommended Nat'l Research Council Milligrams	DOLE %	Recommended Nat'l Research Council Milligrams	DOLE %
	Moderately Active	2500	4%	1.5	20%	70.	17%
	Very Active	3000	3%	1.8	17%	70.	17%
	Sedentary	2100	5%	1.2	25%	70.	17%
	Pregnancy	2500	4%	1.8	17%	100.	12%
	Nursing Mothers	3000	3%	2.3	13%	150.	8%
6 OZ. DOLE PINEAPPLE JUICE CONTRIBUTES		102 Calories		0.3 Milligram		12. Milligrams	

DOLE Hawaiian Pineapple Juice

FROM
HAWAII
U. S. A.



has a perfect right to her idiosyncrasy.

In certain countries tea drinking is nothing short of a ritual. One cup of tea tastes exactly like another. Wherever you find an Englishman having his "spot" you will find him first pouring the milk or cream into the cup, next adding the sugar and last of all the tea.

In Japan, for example, it is the custom to grind tea leaves to fine powder and make a mixture as thick as cream by adding hot water. Then the tea is drunk from the dish, leaves and all. Tea plays such an important rôle in national life that Japanese mothers send their daughters to school to learn how to prepare it properly.

In Russia, tea is served in glasses, milkless but never without a slice of lemon or a spoonful of jam. In the days of the czar, the tea drinker never thought of putting sugar in his cup. Instead, he would put a lump of sugar on his tongue and then drink the tea.

Rum adds the filip to tea in the Balkans, while in Morocco mint gives the tang.

The American Way

Here in the United States, what we take with our tea is optional. We borrow from every country or originate the combination. Twenty-six per cent of us use sugar alone and turn thumbs down on milk or cream. Fifteen per cent use lemon and sugar. Fourteen per cent take it plain. Eight per cent pass up the sugar but add milk or cream. Two per cent add lemon but no sugar. (Apparently the other 35 per cent shun tea.) Scale the foregoing percentages down to hospital proportions and you realize what the diet staff is up against.

Now that we have squarely faced the present problems that tea serving in hospitals brings up, we may like to relax and run over the history of tea itself. There's no commodity that has a more colorful past, no industry with a background so teeming with adventure and romance as that of the tea industry, which got off to a start centuries ago when the clever Chinese began to realize its value as a stimulant to human mind and body. Truth to tell, it was tea that launched our clipper ships and the beginning of our maritime trade.

Although the origin of tea is shrouded in the mists of Chinese antiquity, it is generally agreed that it had its genesis as a wild evergreen plant belonging to the *Camellia* family in the monsoon district of south-eastern Asia. Going even farther back into the legendary period, tea is supposed to have originated in the reign of the Chinese emperor Shen Nung, known as the Divine Healer, reported to have lived about 2727 B.C. Whenever and wherever it may have been discovered is not so important as the fact that the anciently revered "heaven-sent elixir" once restricted to use in the palaces of kings has become the drink of the people.

The most coveted of India teas takes its name from the Darjeeling district on the slopes of The Himalayas where it is grown. Darjeeling is a rich, full-blooded tea and, while one of the few India teas that is drunk unblended, it will give its own distinctively "nutty" flavor to other teas with which it is sometimes fused.

From India, too, comes Assam tea, fine, rich and pungent. This tea, like Darjeeling, takes its name from its home district. Where the Assams now thrive once was dangerous jungle.

Pengalengan tea is grown in fertile tropical soil at an altitude of from 4000 to 6000 feet in the magnificent tablelands of Java and of Sumatra. Pengalengan rivals the best of Ceylon and India teas. This is remarkable because cultivation of tea in the Netherlands East Indies was practically unknown until the late nineteenth century.

Lapsang Souchong is a prime favorite with many a connoisseur. This tea is produced from the larger leaves of a tea plant that flourishes in South China. Its rich sirupy smoky tang provides the exception to the rule that ordinarily the larger leaves of the tea plant make the inferior infusion.

English Breakfast is the most prized tea grown in the Keemun district of Anhwei Province in the North China Congou. In England, by the way, the term "English Breakfast" is never used. This tea is called by its native name, Keemun Congou. Until the 1880's this Chinese tea was sold green, which really means unfermented. Its true flavor began to be better appreciated when

growers started fermenting it into black tea. The thick full liquor and fragrant aroma have caused it to be called the Burgundy of China teas.

Oolong is the tea that lies halfway between green and black tea. This is only partly fermented before firing. Oolong flowers best on the island of Formosa where soil, climate and processing combine to give it piquancy and a fruity flavor.

All of which leads to the conclusion that the great main classifications of tea are black, or fermented; green, or unfermented; oolong, or semifermented. The differences are due to the methods of treating the tea leaf after it is plucked from the bush.

Green tea is withered and heat-treated almost immediately after it is picked. The leaves that are to be made into black tea are put in a dark humidified room for several hours before firing to bring out the natural juices and to develop the essential oils. Oolong tea goes through another process.

Is Commercially Graded

In addition to these three classifications, tea is graded according to the size of mesh the leaf passes through when sifted. Usually only the three tenderest leaves on each twig of the tea plant are picked. After they have gone through the different processes of curing, they are separated into commercial sizes and grades by a series of oscillating sieves.

In spite of the rather general impression in America that Pekoe and Orange Pekoe denote a certain kind of high quality tea, the truth is that such terms refer entirely to the leaf sizes and have relatively little to do with the question of quality beyond the general principle that smaller tea leaves are more desirable than larger. The word "Pekoe" is pronounced "pecko." By and large, it is local conditions that account for quality in tea: the district where the tea grows, the altitude of the plantation, the soil from which the bush springs, the temperature, the rainfall, the sunshine and the climate in general.

From the same plant, modified by different conditions, come tea infusions that may be delicate, piquant, pungent, fruity, plain, powerful, light or heavy or a dozen other descriptive adjectives from the tea connoisseur's vocabulary.

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*Delicious all-beef hamburger
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1-ounce or 2-ounce patties—packed quick-frozen in convenient 9 and 18-pound containers. Special arrangements can be made to supply patties of other sizes.

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These economical patties are ideal any way they're served—in sandwiches . . . as a main meat course. They can be baked, fried or broiled—*without preliminary defrosting*. They're identical in size—come packed 8 or 16 to the pound. You can order exactly the number you need . . . figure portion costs right down to the fraction of a cent.

Many hospitals and other institutions are finding Swift's Premium Hamburger Patties an excellent way to simplify buying . . . to get the truly good meat that wins all-around approval. Try Swift's Premium Hamburger Patties. Ask your Swift salesman, or write to

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April Dinner Menus for the Small Hospital

Mary E. Hines

Dietitian, Parkside Hospital, Detroit

Day	Soup or Appetizer	Meat, Fish or Substitute	Potatoes	Vegetable	Salad or Relish	Dessert
1.	Vegetable Soup	Roast Lamb, Mint Jelly	Browned Potatoes	Buttered Frosted Peas	Carrot Salad	Orange Tapioca
2.	Cranberry Juice Cocktail	Sirloin Steak	Mashed Potatoes	Harvard Beets	Celery Curls	Brown Betty, Butterscotch Sauce
3.	Citrus Fruit Cup	Baked White Fish	Escalloped Potatoes	Buttered Broccoli	Tartare Sauce	Lemon Pudding
4.	Beef Broth With Barley	Meat Loaf, Creole Sauce	Rice	Julienne Carrots	Head Lettuce	Peach Halves, Coco- nut and Almond Whipped Cream
5.	Chicken Broth	Roast Chicken	Mashed Potatoes	Spinach, German Style	Cranberry Relish	Ice Cream
6.	Consommé	Roast Beef	Potatoes au Gratin	Buttered String Beans	Sliced Tomato Salad	Apple Delight
7.	Vegetable Soup	Breaded Veal Steak	Escalloped Potatoes	Mashed Rutabagas	Julienne Salad	Fruit Cup
8.	Clear Broth	Braised Lamb With Vegetables	Browned Potatoes	Cauliflower, Parsley Butter	Pears in Minted Gelatin	Applesauce Cake
9.	Apricot Nectar	Boiled Corned Beef	Baked Potatoes	Escalloped Cabbage	Tomato Aspic Salad	Chocolate Pudding, Top Milk
10.	Purée of Vegetable Soup	Fillet of Pike	Mashed Potatoes	Fresh Spinach	Vegetable Salad	Pineapple Upside-Down Cake
11.	Beef Broth With Noodles	Sautéed Liver	Pittsburgh Potatoes	String Beans	Shredded Salad, Mayonnaise	Gelatin With Whipped Cream
12.	Consommé	Roast Fresh Ham	Browned Potatoes	Creamed White Onions	Cranberry Mold	Butterscotch Tapioca
13.	Tomato Juice	Roast Lamb	Mashed Potatoes	Creamed Celery and Peas	Coleslaw	Dutch Apple Cake, Lemon Sauce
14.	Clear Broth With Barley	Sirloin Steak	Rice	Buttered Broccoli	Lettuce and Water- cress, French Dressing	Gingerbread, Hard Sauce
15.	Cream of Mushroom Soup	Carrot and Ham Loaf	Escalloped Potatoes	Buttered String Beans	Beet Salad	Pineapple Squares
16.	Clear Tomato Soup With Noodles	Stuffed Veal Roulettes	Parsley Buttered New Potatoes	Mashed Rutabagas	Carrot Salad	Baked Custard
17.	Grapefruit Juice	Baked Salmon, Cheese Sauce	Baked Potatoes	Sliced Tomatoes	Celery	Rhubarb Rice With Cream
18.	Vegetable Soup	Boiled Fresh Tongue, Horseradish Sauce	Escalloped Potatoes	Buttered Beets		Fresh Strawberries With Cream
19.	Clear Broth With Celery and Rice	Roast Turkey	Mashed Potatoes	Buttered Frosted Peas	Cranberry Sauce	Meringues With Ice Cream
20.	Pineapple Juice	Baked Ham	Glazed Sweet Potatoes	Escalloped Cabbage	Spring Salad	Bavarian Cream
21.	Purée of Vegetable Soup	Meat Pie		String Beans	Tomato Salad, French Dressing	Lemon Cups
22.	Consommé	Baked Round Steak	Mashed Potatoes	Buttered Frosted Spinach	Shredded Lettuce, Russian Dressing	Fruit Fluff
23.	Beef Broth With Barley	Veal Loaf With Tomato Gravy	Mashed Potatoes	Buttered Carrots	Green Bean Salad	Heavenly Hash
24.	Cherry Juice	Baked Mackerel, Lemon Butter Sauce	Escalloped Potatoes	Stewed Tomatoes and Celery	Head Lettuce, Thousand Island Dressing	Orange Graham Cracker Pudding
25.	Clear Tomato Soup	Lamb Stew With Vegetables		Boiled Spring Greens	Pickled Beets	Peach Dainty
26.	Grapefruit	Sautéed Liver	Spanish Rice	Buttered Asparagus	Cabbage Salad, French Dressing	Apple Crisp, Butterscotch Sauce
27.	Chicken Broth	Roast Chicken	Mashed Potatoes	Broccoli With Mock Hollandaise	Spiced Peaches	Cherry Ice Cream
28.	Minted Pears	Chicken Fried Lamb Chops	Browned Potatoes	Buttered Frosted Lima Beans	Celery Curls and Carrot Sticks	Cup Cakes With Ice Cream Sauce
29.	Vegetable Soup	Sirloin Steak, Spanish Sauce	Rice	Buttered Carrots and Peas	Lettuce and Watercress Salad, French Dressing	Rhubarb Brown Betty
30.	Apricot Nectar	Ham Loaf, Mustard Sauce	Sweet Potato Puff	Buttered Fresh Spinach	Waldorf Salad	Whipped Fruit Gelatin, Custard Sauce

Recipes will be supplied on request by The MODERN HOSPITAL, Chicago.

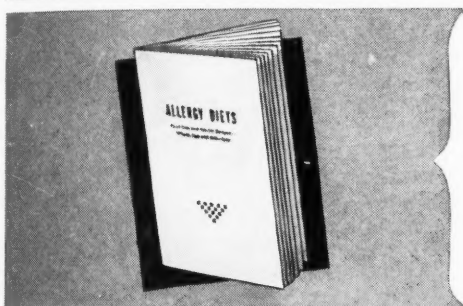
HOW RY-KRISP HELPS YOU KEEP AMERICANS IN TRIM

★ **A word to Hospitals:** *In hospitals, as elsewhere, everyone is taking on extra work — putting in extra time for National Defense. Yet the important job of planning patients' meals must go on — day after day. Won't you let us help you? Ry-Krisp diet books can save your precious time. ★*
Ry-Krisp can help you solve three common diet problems.



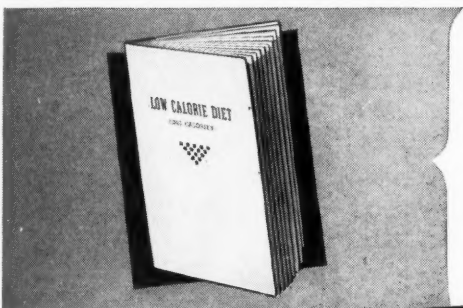
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Made from pure whole rye, Ry-Krisp yields 7 International Units vitamin B₁ per 6.5 gram wafer, is a good source of iron, copper, phosphorus, manganese. A handy, delicious bread that has a place in the "food for freedom" program.



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Made without wheat, milk or eggs, Ry-Krisp is a safe bread for those allergic to one or all three of those foods. To save your time, we offer handy Allergy Diets listing allowed and forbidden foods, giving tested recipes for wheat, milk and egg-free dishes.



HELPS NORMALLY OVERWEIGHT

Ry-Krisp is helpful in low-calorie diets because it has only 23 calories per wafer yet has a high hunger-satisfying value and provides bulk to aid regularity. Dietetically sound Low-Calorie Diets (1700 calories for men, 1200 for women) are available for your distribution.

Free!

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A. A. AITA

Administrator, San Antonio Community Hospital
Upland, California

half an hour off for lunch. These hours and her Sunday off are more attractive than can be offered by the retail drug store.

The pharmacist's time is well utilized as the following abbreviated tabulation of a routine day will reveal.

1. Morning prescriptions and requisitions for supplies are filled.

2. Charts are checked for narcotics issued as well as for the other medications ordered during the night; charges are also made.

3. For convenience, small quantities of supplies, such as alcohol, mouth wash and powder, are kept at the two nurses' stations. These stations are checked daily in order to keep the stock up and to make necessary charges; a busy nurse will often overlook making out a slip for these supplies.

4. Daily inspection is made of the most commonly used supplies in the surgeries, delivery room and emergency room; this has prevented us from "running out," as the stocks are replenished as used. Our emergency room cares for many accidents and during one night will almost deplete an adequate stock placed there the day before. Antidotes for poisons are checked and made fresh or replenished at frequent intervals.

5. Other than the handling of sterilized dressings, our pharmacy acts as our central supply room. Mimeographed forms are used by each department in requisitioning supplies and such supplies are charged to these respective departments. This has markedly reduced waste and leakage.

6. Salesmen and detail men are interviewed; this takes time but is a necessary and important duty of the pharmacist, what with the rapid strides being made in the manufacture of the newer drugs. Many re-

WHEN in 1937 a state law went into effect requiring all hospitals in California to dispense drugs only through a registered pharmacist, we, like many other small institutions in the state, protested. We thought that our method of handling drugs was safe and satisfactory and that we were being forced into unnecessary expense.

Sedatives, narcotics, cough mixtures and other floor medicines had for ten years been dispensed by the head nurse. Prescriptions were filled by a local drug store. Our drug room at that time was a misnomer, as everything from groceries to light globes were stored there along with a small stock of drugs.

To conform with the new regulation we reluctantly procured the services of a local pharmacist for one hour a day. With his suggestions and help, we drew plans for a pharmacy. Our only available space was our storeroom comprising only 140 square feet of floor space. A small prescrip-

tion case was constructed, a 7 foot partition with shelves on both sides was built to the rear of this case in the center of the room and a discarded laboratory sink with goose-neck faucets was installed. Shelves extending to the ceiling were erected on all four walls. A small cabinet with a lock and key for narcotics and sedatives was placed on the wall to the left of the work bench. By the time this work was finished, our first order of drugs had arrived. We were then set up for the dispensing of mill-run prescriptions.

Additional drugs were added from month to month according to our needs. Within six months our part-time druggist could not handle the work in the allotted hour and this was increased to an hour and a half, then two hours, three hours—and, finally, in 1941 we employed a full-time woman pharmacist, a recent graduate of a California university. The pharmacist works the six weekdays from 9 a.m. until 6 p.m. with

From Ether Frolics to Anesthesia



The first surgical operation under ether anesthesia, at Jefferson, Ga., March 30, 1842, performed by Crawford W. Long. Three of the spectators were medical students. Painting by Maurice Siegler, 1935. Loan, courtesy of Dr. Frank Boland, Atlanta.

IN THE 30's and 40's of the last century ether frolics were a common pastime of young people . . . and in their hilarity the participants were often injured, yet felt no pain. It was this observation that led Dr. Crawford W. Long to persuade a friend to have a tumor of the neck removed under the influence of ether vapor. The operation was performed one hundred years ago . . . on March 30, 1842 . . . successfully and without pain.

Thus it was that modern anesthesia developed from the chance discovery that a social custom had most important medical significance. Widespread recognition of the anesthetic properties of ether came in 1846 when Dr. W. T. G. Morton, working independently, gave the first public demonstration, in Boston, of the use of this anesthetic agent.

The difficulty then, as surgeons soon

discovered, was to obtain a satisfactory ether. This problem was solved in 1853 when Dr. E. R. Squibb perfected his process for the continuous steam distillation of ether. So painstakingly had he studied the conditions requisite to making pure anesthetic ether that today, eighty-nine years later, the same essential methods are employed in preparing Squibb Ether, renowned for its reliability.

Because of Dr. Squibb's profound contribution to the development of anesthesia it is particularly appropriate that the House of Squibb pay tribute to Dr. Long, Dr. Morton and others who played their roles in one of the greatest advances in medicine. The debt of gratitude owed to the early pioneers in the field of anesthesia can never be repaid. It is inconceivable to think of surgery today without the benefits of anesthesia.

E·R·SQUIBB & SONS, NEW YORK
MANUFACTURING CHEMISTS TO THE MEDICAL PROFESSION SINCE 1858.

liable houses give out important reprints on the use of these newer drugs; such information is placed on file and is readily available to the members of the medical staff.

7. All incoming shipments except linens, engine room and laundry supplies are checked by the pharmacist.

8. Purchasing for the surgical and obstetrical departments is handled through the pharmacy; however, all purchase orders are checked by the superintendent.

During the night and early morning, the head nurse and floor supervisor have the key to the pharmacy so that additional supplies are available without delay. A record of what was taken is made and the charge is allocated to the department or patient by the pharmacist the next day. With a well-checked, even though small, inventory of commonly used drugs and supplies at nurses' stations, surgeries and emergency and delivery rooms it is not often necessary for the nurse to go in the drug room

during the absence of the pharmacist. In the night and on Sundays our prescriptions are filled by a local drug store. It is a rare occasion that a prescription is filled during the night, less than two a month on an average.

Recently a small gift counter was installed, stocked principally with cosmetics. Already the turnover is far in excess of our anticipation. We are now laying the foundation for our hospital formulary; this will take time and a lot of work, but with the cooperation of the medical staff it can be achieved. Soon, too, we hope to find additional space for the purpose of manufacturing on a very limited scale. This, with the formulary, will effect a definite saving to the patient.

It takes but little imagination to see that our pharmacist delivers to us a useful and busy day and fills an import rôle in our hospital. What has been done here can, it is believed, be duplicated in a hospital of this size even in a rural community such as ours. We began this venture not by

choice, but by force—we now give thanks to the Pharmacy Law of 1937. We started then with a meager inventory of drugs, which has been gradually built up to \$2600. This also includes many supplies used in practically every department. The pharmacy inventory does not include biologicals; these have been handled satisfactorily by the clinical laboratory for ten years. The cost of carpentry work, plumbing and painting was less than \$400; equipment and library cost \$300. This is not a large outlay when stretched over a period of four years and this investment, along with that of a full-time pharmacist, has given us the assurance of safer and more adequate dispensing of drugs. The department is being operated for both service and income. True, the profit is not large, but it is something more than self-supporting.

Our pharmacy has fast become a respected member of the hospital family when only a short time ago it was a mistreated stepchild.

Service to Out-Patient Department

ISABEL KIPPEN

Department of Pharmacy, Western Reserve University

ONE GROUP to which the pharmacy renders service is composed of patients who attend the out-patient clinics. Here, as in the prescription department, it is possible to standardize the stock by use of a formulary. However, the volume of work handled demands different organization.

If possible, a separate room should be devoted to this work or a section should be partitioned off from the prescription department of the pharmacy to avoid interference with service there. Preparations may be kept bottled and stored on shelves ready for dispensing. Filling prescriptions is facilitated by not numbering the individual prescriptions and by having preparations ready to be handed out, labeled with a space for the dosage. Specified hours for dispensary service provide time for replenishing stock and keeping records.

The latter is important because much of the work done through this department is for indigent or part-pay cases. An accurate record of the

stock received and dispensed, compared with the number of patients served, makes an interesting study. If carefully watched, it serves as a guide in tracing unusual fluctuations. In making this study the cost of operation should include containers and labels and the services of the pharmacist. An economically and efficiently operated out-patient department is the second step in the proper development of a hospital pharmacy.

The organization and development within the out-patient department itself are the responsibility of the pharmacist. Once these are established, expansion of service in cooperation with the medical and nursing staffs should be developed. Printed instructions for diabetic and gallbladder patients can be compiled. A record of medications dispensed for clinical trial from this department should be of interest to the administrative staff.

If the services of a social service worker are not available, the responsibility of developing some system of investigating the economic status of the patient and a method of determining the charges to be made for the prescriptions filled will, in all probability, be requested of the pharmacist in conjunction with the administrative staff.

Economies in the out-patient department, based on the direct application of the professional knowledge and the ingenuity of the pharmacist in meeting the demands of the medical and nursing departments, can be demonstrated by statistics. An accurate estimation of the volume of service rendered is not always appreciated or realized by the administrative staff.

It becomes important, therefore, that the pharmacist make the most of his opportunity to impress these various departments in the hospital with the value of his services.

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DIVISION OF PRIORITIES
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AS AMENDED TO SEPTEMBER 30, 1941

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Artificial Pneumothorax Treatment

ALLEN KANE, M.D.

Director, Division of Tuberculosis
Department of Hospitals, New York City

THE indications for artificial pneumothorax therapy are fairly well defined and generally well known. The objective is to obtain a degree of pulmonary collapse to wall off and immobilize the diseased area.

Procedures used to induce artificial pneumothorax may vary in different institutions and among phthisiotherapists. However, in many respects the methods are, in the main, similar.

X-ray, fluoroscopic and physical examinations aid the physician in determining a free pleural space or an area most likely free of pleural adhesions.

In some institutions a mild sedative is given routinely to allay apprehension preparatory to induction; in others, a sedative is administered only when it is judged necessary.

The patient is placed on the treatment table and lies on his side with arms extended toward the head of the table. A small pillow inserted between the patient's axilla and the table will cause the ribs of the pneumothorax side to flare.

Standard Procedure

Under aseptic precautions, the chest at the area of maximum resonance is sterilized with iodine and alcohol. A small sterile sheet with an aperture exposing the site of injection is placed over the chest wall. Two per cent novocain solution is injected slowly through the intercostal space. Bubbles of air appearing in the solution remaining in the barrel of the syringe indicate that the needle has passed into the pleural space. The induction needle, usually 20 gauge with short bevel, is inserted along the anesthetized tract. The rubber tube leading from the pneumothorax apparatus is attached to the induction needle while being inserted or shortly thereafter. The end of the rubber tube, which is handled by the operator, is kept sterile. Fluctuations in the water manometer inform the operator that the needle point is in the free pleural space. Air is insufflated into the pleural cavity by adjusting the water levels in the two bottles of the pneu-

mothorax machine. The water in the raised bottle will syphon into the lower bottle. This will cause the water level in the latter to rise, forcing air into the pleural space.

About 200 cc. or more of air is given, depending on the type and extent of the disease: manometer readings are taken at 50 cc. intervals. The insufflated air overcomes the negative intrapleural pressure so that the negative readings at the beginning tend to become less, may equal atmospheric pressure, or the pressure may become slightly positive at the termination of treatment. The needle is withdrawn and the tract obliterated by mild massage at the site of injection. A small piece of sterile gauze is placed over the site and held in place by adhesive. The entire procedure, barring complications, is usually accomplished in from five to ten minutes. Fluoroscopic examination will reveal air in the pleural space and the degree of collapse.

The pressure at the beginning and end of treatment, the amount of air given, complications, if any, and the date of treatment are recorded by the nurse assistant. Sixteen or 18 gauge needles are used for refills. Bilateral pneumothorax refills are administered at alternate intervals.

Pneumothorax patients are usually scheduled in groups and a three hour session can accommodate 18 patients. Freshly sterilized needles and syringes are used for each patient. The operator has sterile gloves and may use a mask. Masks are available to the nurse assistant. She assists patients on and off the table, manipulates the valves on the machine that control the flow of air and enables the operator to watch fluctuations in the manometer, arranges for transportation of patients to and from the ward and informs the patient of the date of the next refill.

The out-patient pneumothorax clinic, like any other clinic service, has its staff of specialists, nurses, social service workers, clerical and

maintenance employes, laboratory and x-ray facilities. Located within the hospital building, the clinic can avail itself of other specialties not only in the out-patient department but also in the hospital. Moreover, the clinic patient can be readily admitted to the hospital when hospitalization is indicated; also, continuity of supervision can be maintained when the hospital patient is discharged to the clinic.

An appointment system brings a stated number of ambulatory pneumothorax patients to the clinic per session. The patient load determines the number of sessions and physicians allocated to this service. A maximum of three hours or a minimum of two hours constitutes the duration of a clinic session.

Follow-Up Treatment

Initial pneumothoraces are performed preferably in the hospital. Patients no longer in need of institutional care are discharged to the clinic for subsequent refills. Treatment is continued for approximately two years or more, depending upon clinical factors in each case. Re-expansion of the lung or lungs without recrudescence or relapse, persistent negative sputums, constitutional improvement and x-ray evidence of a healed lesion are clinical determinants of cure.

The clinic records, as well as those of the hospital, contain the history of the patient, periodic inventory of symptoms and x-ray and laboratory findings, including sputum examinations, smears, concentrates, gastric examinations, cultures, progress notes, diagnosis, prognosis and reasons for termination of treatment.

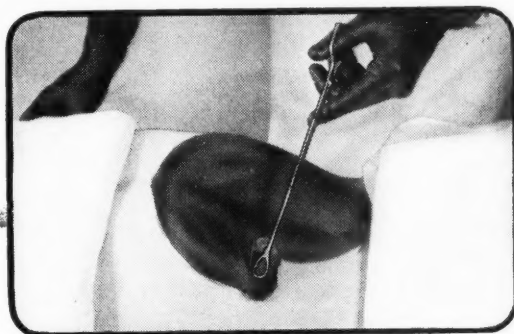
The institutional social service worker familiarizes herself with the patient's socio-economic status, attempts to solve domestic problems and maintains periodic personal contact with the patient and with the immediate family to assure continuity of clinic attendance.

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CLINICAL BRIEFS

Conducted by E. M. Bluestone, M.D.

Dental Anesthesia

IT IS possible to perform painless operations under local anesthesia today because of the improvements in local anesthetics and refinements in the operator's technic in administering them, Sweeney declares in the November *Journal of the American Dental Association*.

In the past decade we saw the changes in local anesthetic solutions of procaine hydrochloride, with the synergistic action of the vasoconstrictor of epinephrine from a low hydrogen-ion concentration to buffered, to alkaline and finally back to buffered solution just short of being neutral because of the instability of alkaline solutions.

Claims for buffered solutions are that they produce anesthesia almost immediately and cause no pain subsequently.

The author claims he has used monocaine, one of the newer local anesthetics, for many patients suffering from heart disease and in apparently normal patients without any of the troublesome symptoms occasionally attributed to the use of procaine solution.

The author stresses the use of pre-medication for the apprehensive patient; an attitude on the part of the operator that will instill confidence in the patient; the importance of the use of sharp needles, topical anesthetics and slow injections of local anesthetics, and avoidance of injection into swollen, inflamed and infected areas.—I. SALMAN, D.D.S.

Abdominal Surgery

THE USE of continuous novocaine spinal anesthesia has constituted a marked advance in abdominal surgery, especially of the stomach and duodenum, Allen states in the *New England Journal of Medicine* (226: 57, 1942). It may be supplemented by intra-abdominal splanchnic block. Bronchoscopic removal of secretions during and after operation is so important that all anesthetists should be trained in this technic.

"Quilting cotton" has been found to be a better suture material than either silk or catgut. It is easier to handle and knots are more easily set. If boiled while wound on rubber tubes its shrinking does not weaken the fibers. Sizes Nos. 30, 40 and 60 are the most useful.

A new type of war wound of the abdominal viscera, namely, crushing or concussion without penetration, has occurred frequently during the present conflict. Early intervention for pen-

etrating wounds (under six hours) together with the use of the Miller-Abbott tube and the sulfonamides has greatly improved the results. Foreign bodies should not be removed unless they are easily accessible or are the cause of a persistent fistula. Drainage of subphrenic or pelvic abscesses and closure of high intestinal fistulas should be performed early.

Marked advance has been made in the surgical treatment of appendicitis with peritonitis. With the use of Wangenstein suction, the Miller-Abbott tube and the sulfonamides both locally and systemically, the mortality has been greatly reduced.

The question of early *versus* delayed operation in acute cholecystitis is still a source of debate. The general principles used at the Massachusetts General Hospital, Boston, are as follows: acute cholecystitis should be operated on as soon as the diagnosis is made, fluid balance is restored and operative facilities are at hand. The operation rarely should be considered an emergency and cholecystectomy should be done whenever possible. Anomalies of

the hepatic artery occur with sufficient frequency to make their consideration essential for safe surgery. A vitalium tube for the repair of the common duct has been used satisfactorily.

In the diagnosis of a perforated abdominal viscus, x-ray films exposed in the lateral decubitus position will reveal air in the peritoneal cavity in a higher percentage of cases than when films are taken in the upright position. The question of subtotal gastrectomy for duodenal ulcer is reviewed with the conclusion that although this is the commonly accepted procedure at present it does not appear to be the final answer to the problem. When the cases are chosen carefully and prepared properly the mortality and complications of this major procedure have been reduced to a minimum.

The percentage of errors in the diagnosis between gastric ulcer and cancer runs from 15 per cent to 35 per cent. Benign gastric ulcerations usually heal rapidly under adequate medical therapy. Obvious gastric cancer has only a 20 per cent chance for a five year survival following partial gastrectomy, whereas those resected as ulcers, and later found to be malignant by the pathologist, have a 40 per cent survival chance. This is the best argument for early radical surgery in the borderline group.—ARTHUR H. AUFSES, M.D.

NOTES AND ABSTRACTS

Conducted by Carl C. Pfeiffer, M.D., F. F. Yonkman, M.D., Arnold J. Lehman, M.D., and Harold Chase, M.D.

Nicotine and Tobacco

NICOTINE has no therapeutic applications. Since it is the most important component of tobacco smoke, possessing marked pharmacologic actions, a great deal of scientific and toxicologic interest has been devoted to the effects of the alkaloid. Habitual use of tobacco by a large part of the population brings up problems concerning chronic nicotine toxicity. Tobacco smoking is classed as a drug habit because of nicotine, which may be absorbed in sufficient amount during smoking to produce measurable pharmacologic effects.

Composition of Tobacco Smoke

The amount of nicotine that may be taken into the system while indulging in tobacco depends upon a variety of factors. Obviously, the first consideration must be the nicotine content of tobacco. Each species varies, but values usually ascribed range from 0.5 to 8 per cent. However, nicotine contained in tobacco has no bearing on amounts

found in smoke. Moisture content is important. The drier the tobacco the more complete is its combustion; consequently, less nicotine appears in the smoke.

The manner in which cigars and cigarettes are made also decidedly influences nicotine concentration in the smoke. A slender cigar or "king" size cigarette may contain less when the first half is smoked, owing to a filtering and condensing action of the tobacco itself, but in consumption of the remainder an actual increase in alkaloid content may be experienced.

In the ordinary intermittent smoking of a cigarette, the smoke contains about 7 milligrams of nicotine of which perhaps 3 milligrams is absorbed, *i.e.* the consumption of a pack of twenty a day would introduce 60 milligrams into the body, an amount that Dixon states is fatal to the average man. However, owing to the slow intake and to the tolerance developed by man, few if any individuals experience any discomfort.

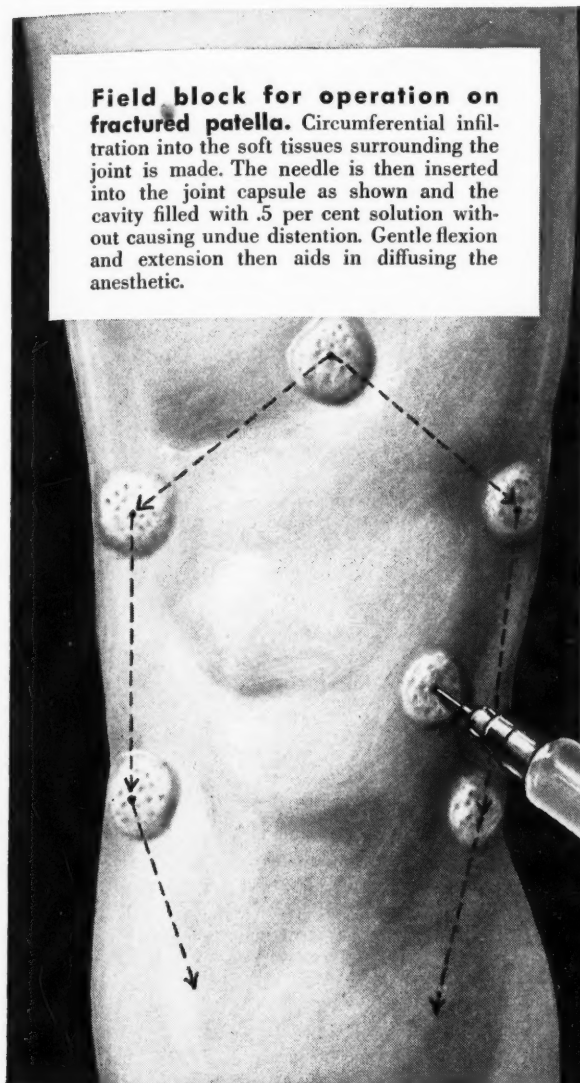
Other products of tobacco combus-

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cation have been considered as harmful. Among these may be listed carbon monoxide, ammonia, hydrocyanic acid, aromatic oils and tars, but none appear in quantities sufficiently large to be of pharmacologic significance.

Action on Alimentary Tract

The most prominent effects of smoking are exerted on the alimentary tract, cardiovascular system, respiration, central nervous system and, more rarely, the eyes. Schnedorf and Ivy have investigated actions of nicotine and smoking on the alimentary tract using as subjects smokers and nonsmokers. They found that there is a reflex stimulation of salivary flow produced by irritants in the smoke. This general irritation can affect mucous membranes of the mouth, nose and throat, which may lead to catarrhal conditions or even to development of epitheliomas of the exposed tissues. Other effects noted were loss of appetite and abolition of hunger contractions of the stomach, which might last as long as one hour.

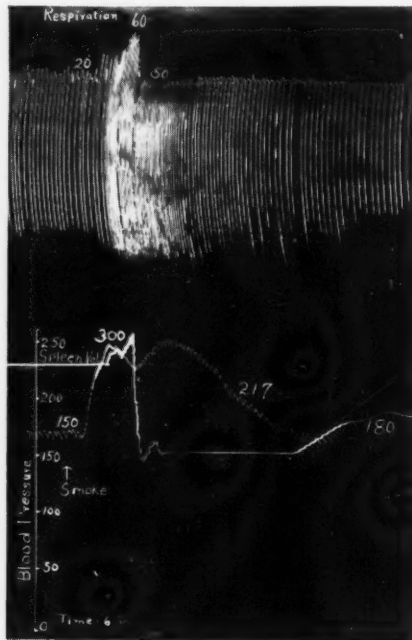
Changes in gastric acidity were also studied. Of 40 persons under observation only one showed an increase in volume and acidity of gastric contents. This seems to rule against the complaints of some smokers of acid indigestion, heart burn and related symptoms. No significant changes occurred in gastric secretions of patients with peptic ulcer; this, likewise, may offer a basis for dispelling the opinion of gastro-enterologists that smoking may be harmful under such conditions or may favor production of an ulcer.

Intestinal movements, especially of the colon, may be modified. Smoking apparently augments muscular activity of the lower bowel and in this way may tend to keep the bowels regular. From this fact it is conceivable that tobacco could be interdicted with beneficial results by individuals who possess a hyperactive colon (colitis).

Circulation and Respiration

Smoking has a fairly acute effect on the circulatory system. Disturbances of rhythm and palpitation of the heart may be experienced. These may become persistent in the immoderate use of tobacco. Slight rises in blood pressure have been recorded during smoking as well as some increases in the heart rate. A vasoconstriction of peripheral vessels is practically always present. This reaction may be so pronounced that individuals with a sensitive vasomotor system can experience cold hands and feet after smoking a single cigaret. This type of person, as well as one who has essential hypertension, has a more marked rise in blood pressure than the average individual.

Even though these pressor effects are scientific facts, there is as yet no good evidence that the use of tobacco is harmful to the hypertensive patient, although he may be better off by modifying his smoking habits. Furthermore, indulgence in tobacco probably



Charted here are the physical effects of smoking recorded in an experiment in which a dog was allowed to inhale tobacco smoke. Respiration, blood pressure and pulse rates rose considerably. Oncometric tracing of the spleen volume, recorded simultaneously, showed a marked decrease in size.

does not precipitate angina pectoris or coronary thrombosis. Development of arteriosclerosis is likewise not considered as a complication of the tobacco habit.

One of the peripheral vascular disturbances, Buerger's disease, seems to have some connection with smoking. At least the symptoms tend to become worse if the habit is continued and the consensus of most authorities is that a patient with this condition should abstain completely. In most disturbances of the circulation caused by tobacco the indulger becomes cognizant of his difficulty and, realizing the cause, stops smoking. The condition practically always improves; hence, serious tobacco poisoning is extremely rare.

A graphic picture of the immediate effects of smoking on blood pressure and respiration is presented in the accompanying record, in which a dog was allowed to inhale the smoke from one half of a popular brand of cigaret. Blood pressure, pulse and respiratory rate and an oncometric tracing of the

spleen volume were recorded simultaneously during the administration of the smoke. It will be noted that blood pressure rose from 165 mm. to 250 mm.; heart rate increased from 150 to 300 beats per minute; respiration increased both in rate (from 20 to 60 breaths per minute) and in amplitude, and the spleen showed a marked decrease in size, indicating a considerable disturbance in visceral blood flow.

Under the conditions of the experiment, the dog inhaled the smoke deeply and within a few minutes; the effects as recorded probably represent an exaggerated response that the average smoker might not experience. Nevertheless, various grades of these circulatory and respiratory symptoms can occur, depending on the smoker's habits.

Nervous System and Eyes

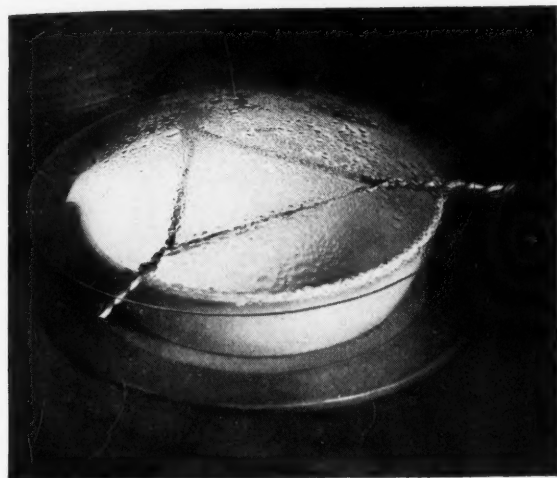
Nicotine acts primarily as a stimulant to the central nervous system. Autonomic nerves and their components come in for an important share of this effect. Giddiness, tremors, nausea and vomiting are not uncommon. However, paradoxically enough, the main effect of smoking seems to be a sedative one, which resolves itself into a soothing action on nervous equilibrium, promoting a sense of well-being and relaxation. According to Mendenhall's experiments, this action is similar to the phenomena of rest.

Eye effects are commonly associated with overindulgence and consist of dilated pupils, imperfect accommodation and dimness of vision, which may progress to complete blindness. These symptoms usually disappear by modifying the smoking habit.

Much has been written concerning the effects of smoking on growth. Scientific knowledge indicates that there is no evidence to support claims that tobacco inhibits growth. Theines has carried out a series of experiments on mice; his observations show that animals fed nicotine in their diet present the same growth curve as those that received the same diet without nicotine. This is only one of a number of such experiments that could be quoted. There is no evidence that human growth is modified in one way or another by tobacco.

Other than a significant effect in certain types of peripheral vascular disease, indulgence in tobacco produces no deleterious actions on the human system. The answer to the question as to whether the tobacco habit is harmful or otherwise has not yet been elucidated. Certainly, general prohibitions are at present not indicated by the weight of scientific evidence now at hand.—ARNOLD J. LEHMAN, M.D.

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- ☐ Dehydration of Pathological Sections
- ☐ Drug Tincture & Extract Preparations
- ☐ Duodenal Drainage
- ☐ Floor Dressings and Packs
- ☐ Gastric Analysis
- ☐ Hand Rinsing After Scrub-up
- ☐ Hypodermic Injections
- ☐ Massage and Sponge
- ☐ Pharmaceutical Preparations
- ☐ Pharmacy Solvent for Vegetable Drugs
- ☐ Preserving Specimens
- ☐ Protein Precipitant
- ☐ Spirit Lamps
- ☐ Stains and Reagents
- ☐ Sterilizing Instruments
- ☐ Sterilizing Skin
- ☐ Surgical Soap Preparation
- ☐ Sutures Sterile Solution
- ☐ Therapeutic Nerve Block

News in Review

Reorganization Under W.P.B. Effects Slight Changes in Hospital Agencies

RUTH HILL ZIMMERMAN

Washington Representative, The MODERN HOSPITAL

WASHINGTON, D. C.—Few changes of concern to hospitals have resulted from the recent conversion of the Office of Production Management into the War Production Board.

A new health and medical supplies section has been set up in the Civilian Supply Division under Leon Henderson. Robert P. Fischelis of the New Jersey Board of Pharmacy has been named chief of the section and Dr. Louis Reed of the National Institute of Health has been lent to the section by the U. S. Public Health Service. Mr. Fischelis and Doctor Reed are working closely with the already existing Health Supplies Branch, of which William M. Bristol is chief.

The Health Supplies Branch, now one of the industrial branches of the Division of Industry Operations, headed by J. S. Knowlson, has been enlarged and given some additional responsibilities, including handling of applications for priorities for construction projects of non-governmental hospitals and the health supplies industries. Governmental hospital projects are handled by the Governmental Requirements Branch of the Division of Purchases. (A more complete description of the procedure relating to priorities for hospital construction projects may be found on page 47 of this issue.)

An amendment to the Health Supplies Rating Plan, changing the procedure for extension of ratings, was announced on February 13. This amendment brings the Health Supplies Rating Plan into conformity with other War Production Board priorities orders (such as P-100, the maintenance and repairs order) in that it is no longer necessary to produce copies of the order to extend the rating. Instead the "producer" [manufacturer], supplier or subsupplier may extend the rating by endorsing on each purchase order or contract the following statement: "Preference Rating A-10 is applied hereto under Preference Rating Order No. P-29, Serial No. (s) _____ with the terms of which Order the undersigned is familiar. This rating may be extended only upon the terms of said Order, copies of which may be obtained from the undersigned or from any office of the War Production Board." An additional simplification of procedure is that the manufacturer will not

sign an acceptance of Order P-29 and the supplier or subsupplier will sign one only if he re-extends the rating to his supplier.

Another amendment to the Health Supplies Rating Plan, which has been under consideration for several months but which had not yet been approved by February 16, would provide for higher ratings to obtain certain materials needed in the manufacture of some health supplies. The same amendment also would include pharmaceuticals in the list of health supplies.

An order designed to conserve vitamin A for human consumption was issued on February 10. This order, prepared in the Health Supplies Branch, prohibits the manufacture of multivitamin tablets, capsules, pills or liquids containing more than 5000 units of vitamin A in the largest daily dose recommended by the label of accompanying instructions. It prohibits the use or dilution for use in the manufacture of feed of fish liver oil with a potency of more than 12,000 units of vitamin A per gram. Beginning April 10, it prohibits the manufacture or preparation of feeds that contain more than 1000 units of vitamin A per pound, derived from fish or fish liver oils.

Supplies of agar in the United States were "frozen" on February 9 by the War Production Board in order that the material might be conserved for use as a culture in growing bacteria, which is its most essential use.

Although drastic limitation orders on the use of crude rubber, tin and mercury have been issued by the War Production Board, suitable provision was made for the use of these materials in the manufacture of health supplies. The use of these materials is not to be increased but may be continued at 100 per cent of the 1940 rate.

Aluminum also has been drastically curtailed for general use but is permitted for containers for intravenous solutions, x-ray tube housing and orthopedic equipment where light weight is vital. Also worn out or defective aluminum parts may be replaced if the old parts are returned by the consumer.

Hospitals may obtain microscopes and scientific instruments under the maintenance and repair order, P-100. If the A-10 rating under this order is not suffi-

cient, then a PD-1A form may be used.

Ethyl alcohol and related compounds are not restricted for persons holding internal revenue permits.

An interpretation of the preference rating order for research laboratories was recently published to make clear that the only material that may be obtained under the order is that which will itself be used in the conduct of the laboratory, not in construction or expansion.

Request for Civilian Medical Supplies Pends Passage in Congress

WASHINGTON, D. C.—Included in the \$100,000,000 requested for the Office of Civilian Defense, still under debate in Congress on February 17, is an item of \$4,890,290 for surgical, first-aid and hospital equipment to be distributed to communities in which it may be needed.

Medical and surgical supplies, cover stretchers, cots, folding hospital beds and mattresses, surgical beds, first-aid equipment and bandages are included in the list, according to Mayor F. H. La Guardia, who said, in testifying before the subcommittee of the House Appropriations Committee, that they represented the minimum requirement.

"Some cities," he remarked, "will require a greater amount of supplies and medical and surgical equipment in their hospitals to take care of the injured." To a comment concerning the prices of supplies included in the list, Mayor La Guardia replied that there has been an enormous increase in prices of all medical, surgical and hospital supplies.

The Medical Division of the Office of Civilian Defense will be in charge of distribution of this equipment.

Federal Funds Allocated to 14 Additional Projects

Approximately \$2,800,000 of federal funds was earmarked for 14 hospital construction projects and for five health centers during the month ending February 16 by the Federal Works Agency, which administers the Defense Public Works program. In addition, the expenditure of \$660,500 for federal aid in maintenance and operation of two institutions was approved.

The hospital projects are in the following communities: Sylacauga, Ala.; Little Rock, Ark.; San Diego and Santa Monica, Calif.; Bristol and New Britain, Conn.; Midland and Pontiac, Mich.; Buffalo, N. Y.; Warren, Ohio; Lawton, Okla.; Orangeburg, S. C.; Petersburg, Va., and San Juan, Puerto Rico. The health centers will be built at San Ardo, Calif.; Elizabethtown, Ky.; Shreveport, La.; Lawton, Okla., and Abilene, Tex.

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Community Defense Plan Centers About Hospitals, Col. Baehr Tells Assembly

The seriousness of the present situa-
tion was effectively brought home to the
presidents and secretaries of state and
regional hospital associations in their
Chicago meeting last month by Col.
George Baehr, medical director of the
Office of Civilian Defense, whose elo-
quent speech was one of the highlights.

Doctor Baehr outlined the general
program of community organization and
stressed particularly the importance of
conserving man power. He said that
this was the reason why the casualty
service units are organized around the
hospitals. The *Normandie* fire demon-
strated the importance of control of such
units, Doctor Baehr stated, since 13 units
responded to that fire with resultant con-
fusion. He emphasized particularly that
no unit should ever move until ordered
by central headquarters. Most incidents
will be multiple and are likely to be
recurring, he stated. If casualty units
go out on the first attack, they may be
unavailable for more serious attacks.

British and Spanish experience has
demonstrated, he stated, that from 40
to 50 per cent of all casualties die out-
right or immediately thereafter. This
indicates the imperative necessity of get-
ting casualties to hospitals promptly.

Because of the severity of injuries, it
is important not to overload any one
hospital. Fifty severe cases is about as
much as any large hospital can handle,
since all cases should be worked up
within six hours and two complete oper-
ating teams can do only about one and
one half cases per hour. For this reason
it is imperative that the central control
station be notified before the hospital
has accepted its capacity load so that
cases can be shunted to other institutions.

"No ambulance should ever move au-
tomatically but only on order from the
central control station," Doctor Baehr
emphasized again and again. "On its
return it should report to the control
station for further orders."

Metropolitan areas are divided into
districts and each district has its own
control center and uses only the facili-
ties assigned to it. When these facilities
are nearly used up, the district control
center can appeal for assistance.

One hundred thousand beds and mat-
resses, 15,000 of which would be for
fracture cases, are being purchased to
supplement the facilities of local hospi-
tals, Doctor Baehr stated. These and
other emergency supplies will be pur-
chased by the Army and stored in Army
depots along the coastal areas. They will
remain the property of the government
but will be lent to hospitals as needed.
It is hoped to have these supplies ready

for distribution as soon as possible after
the appropriation is passed by Congress.

Evacuation of hospital patients to base
hospitals in the country in well-located
convalescent institutions, mental hospitals
or other suitable quarters is another
mammoth problem facing O.C.D. An
inventory is now being made of all hos-
pital facilities in each state. Transporta-
tion facilities are also being studied,
since ambulances will all be in use.

The need for additional nursing as-
sistance was foreseen last July, Doctor
Baehr pointed out, but was not taken
seriously until Pearl Harbor. The pres-
ent volunteer nursing aids course is
much stiffer and more disciplined than
that of the Pink Ladies or Gray Ladies.
A bottleneck has arisen in the plans in
spite of splendid cooperation on the part
of hospitals, Doctor Baehr declared,
owing to an insufficient number of pre-
liminary courses and applicants.

Doctor Baehr also pointed out that
large general hospitals will have to share
their staffs of doctors and nurses with
the emergency base hospitals established
in the rural areas in case of bombing
attacks.

A plan is under way for providing
blood and plasma banks for all approved
hospitals of 150 beds or more that have
competent laboratory directors. The
O.C.D. does not want to compete with
the Army and Navy in soliciting and
processing blood for these banks. There-
fore, steps have been taken to increase
the processing capacity of all commercial
plasma laboratories and also to enlist
public health and other qualified labora-
tories in the task of providing plasma or
blood in various forms.

Prior to Pearl Harbor a plan was
worked out whereby the military forces
would take 10,000 units a week and
O.C.D. would take 5000. Since the at-
tack, however, the requirements of the
military and civilian forces have been
pooled. The American Red Cross is
now the sole agency for collecting blood
and has undertaken to keep all available
laboratories supplied at full capacity.
The product will be held by the Army
and other agencies will draw from its
depots as needed.

The foresightedness of an ophthalmolo-
gist in Honolulu was responsible for
building up a bank there that saved
many lives, Doctor Baehr reported.

Doctor Baehr expressed confidence that
some way would be found to pay hospi-
tals for the expense incurred in caring
for war casualties. The communities
suffering from the bombing should not
also have to pay for the care of their
injured, he pointed out.



M. BURNEICE LARSON, *Director*

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One of the most difficult tasks of all must be begun about the time the architect's plans are approved . . . the assembling of properly trained personnel. Our first request is usually for a competent administrator. Then, when a suitable executive has been found, credentials are considered in connection with key appointments on the nursing staff, in the laboratories, record room, pharmacy, and physiotherapy department.

If you would like to be on the charter staff of a new hospital—write us for a registration form today. We know where staffs are being assembled—when new hospitals have scheduled their opening dates! When you write, be sure to let us know the capacity in which you are prepared to serve that we may send you the proper form. Our service, as you know, is completely confidential.

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Survey of Hospital Personnel Needs Will Serve Civilian and Military Interests

WASHINGTON, D. C.—Hospitals and other institutions employing the services of physicians, dentists or veterinarians will be queried around March 1 by the Procurement and Assignment Service of the Defense Health and Welfare Services concerning their personnel needs. The letter, prepared with the advice of the hospital committee headed by Dr. Winford H. Smith, will ask the institutions to analyze their personnel needs and give detailed reports of personnel employed, listing employees under one of two headings: temporarily essential or available for transfer.

Dr. Sam F. Seeley, director of the Procurement and Assignment Service, pointed out that military needs will be so greatly increased that civilian institutions must be prepared to cut down on personnel drastically. However, the service is set up to protect civil inter-

ests as well as to supply military requirements and it is quite probable that many available individuals will be called to serve in civilian institutions or communities where there is a shortage of professional personnel.

Enrollment of all physicians, dentists and veterinarians in the national service will also be undertaken early in March. Each registrant will be asked to indicate his choices in order of preference from a list of military and civil assignments.

Although preliminary enrollment, which has been going on for some weeks, includes only a small part of the full anticipated enrollment, the Procurement and Assignment Service has already supplied many persons for Army and Navy assignments.

A bulletin designed to answer questions concerning the organization and functions of the Procurement and Assignment Service was published late in February.

Start Planning Now!

It is not too early to begin planning for your celebration of National Hospital Day on May 12. Leaflets explaining the awards offered and containing helpful suggestions for observance of the day are available at headquarters of the American Hospital Association, 18 East Division Street, Chicago.

Construction of Nursing Home to Go Forward Under Preference Rating

Announcement last month that St. Luke's Hospital, Chicago, had received an A-8 preference rating for the new \$775,000 nurses' home and would go ahead with construction immediately was dramatic evidence of the War Production Board's view that nursing education is important.

In answer to an inquiry, William M. Bristol Jr., assistant director of purchases in charge of the Health Supplies Branch of the War Production Board, stated that the board "looks upon the establishing of nurses' training facilities as a desirable defense activity and consideration has been given to projects of this nature based upon their relative merits. In the event your subscribers wish to do any renovating of a major character, it will be necessary for them to apply on a project rating basis."

Form PD200-200-A is designed for this purpose and should be forwarded to the health supplies branch.

O.C.D. Appoints Two New Regional Medical Officers

WASHINGTON, D. C.—Appointments recently announced by the medical division of the Office of Civilian Defense include the naming of two regional medical officers. Dr. Dugley A. Reekie, assistant director of health and chief medical officer of the Tennessee Valley Authority, has been appointed regional medical officer of the first civilian defense region with headquarters in Boston. Doctor Reekie succeeds Dr. Allan M. Butler of Boston, who resigned on February 1 to become head of the department of pediatrics at Massachusetts General Hospital.

Dr. John S. Coulter, associate professor of physical therapy, Northwestern University Medical College, was named regional medical officer of the sixth civilian defense region with headquarters in Chicago.

William H. Cary Jr., recently associated with the Norman Boosey Manufacturing Company, Detroit, has been appointed regional sanitary engineer for the sixth civilian defense region.

Price Ceilings Set on Hospital Items

While most hospital products have not been subjected to price control measures, various items of interest to hospitals were so controlled during the past month. Price Schedule No. 89 sets ceilings on bed linens. Manufacturers of plumbing fixtures and iron boilers and radiators have been asked to maintain present prices. Maximum prices on nicotine sulphate have been requested.



Q. When I serve a dish of canned peas or spinach or some other canned vegetable to a patient, how can I know how much ascorbic acid the patient is getting?

A. I couldn't assign a definite numerical value. All vegetables have an upper and lower limit of ascorbic acid content. This probably is also true for their other essential nutrients. The ascorbic acid content of a given sample is determined by a number of factors, like variety, state of maturity when picked, soil, weather, and what happens to the vegetable between the time it is harvested and served to the patient. It is very likely that canned vegetables are fully equal in ascorbic acid content to kitchen-prepared vegetables. I suggest you be guided by reliable publications on the ranges of vitamin contents in canned foods. (1)

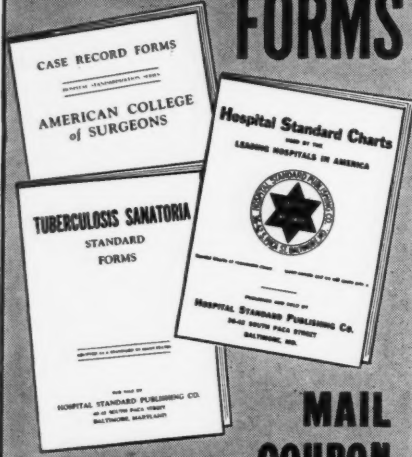
American Can Company, 230 Park Avenue, New York, N. Y.

- (1) 1936. Food Research 1, 3
 1936. Ibid 1, 231
 1938. Nutrition Abstracts and Reviews 8, 281
 1939. The Canned Food Reference Manual,
 American Can Co., New York.
 1940. J. Am. Diet. Assoc. 16, 891



The Seal of Acceptance denotes that the nutritional statements in this advertisement are acceptable to the Council on Foods and Nutrition of the American Medical Association.

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Series of Thirty War Sessions Planned by College of Surgeons

A series of one day meetings that will offer physicians, surgeons and hospital personnel firsthand opportunities for information about their war duties is being arranged by the American College of Surgeons, with the cooperation of the Army, the Navy and the Office of Civilian Defense. Under the present plans, 30 such meetings will be held in all parts of the country to permit participation of the medical and hospital professions in every state and in the District of Columbia. Arrangements for a similar program are being made in Canada.

The morning program for hospital representatives will include a forum on civilian defense as it affects hospitals, to

be conducted by a representative of the Office of Civilian Defense, and a joint session with the physicians and surgeons during which the organization and functions of the Army and Navy medical department will be outlined. Following luncheon there will be a panel discussion on hospital problems incident to the war.

Each war session will close in the evening with a short discussion of the American College of Surgeons' relation to the defense program and with two panel discussions, one on treatment of burns and the other on the prevention and treatment of shock.

The schedule of meetings for the first of the five areas which it is intended to cover is: March 2, Louisville, Ky., Brown Hotel; March 4, Nashville, Tenn., Andrew Jackson Hotel; March 6, St. Louis, Jefferson Hotel; March 9, Chicago, Stevens Hotel; March 11, Detroit, Statler Hotel; March 13, Columbus, Ohio, Deshler-Wallick Hotel.

The Army will be represented at the meetings in Louisville, Nashville and St. Louis by Brig. Gen. Charles C. Hillman and in Chicago, Detroit and Columbus by Maj. Roger G. Prentiss Jr. The Navy will be represented by Capt. Frederick R. Hook. Dr. William S. Keller will represent the Office of Civilian Defense at Louisville and Columbus, Dr. Judson D. Dowling will be the representative in Nashville and Dr. John S. Coulter in Chicago, St. Louis and Detroit. The procurement and assignment service will be represented at the war sessions by Maj. Sam F. Seeley or by a specially appointed delegate.

Tax Exemption Revoked for Washington Hospitals

All voluntary hospitals in the District of Columbia have been taken off the tax exempt list and placed on the tax list of the District. This was due to an interpretation of a 60 year old law that an institution charging patients any part of the cost of hospitalization is not a charitable hospital within the exemption of the tax law.

The hospitals have protested the interpretation and legislation is being prepared for presentation to Congress to correct the ruling of the District. In the meantime, it is reported that the District will take no action to collect the taxes until a more thorough investigation has been made. The tax is very heavy and will constitute a severe drain on the hospitals if collected. Emergency Hospital, for example, is taxed \$46,000.

The presidents' and secretaries' conference meeting in Chicago agreed to call the matter to the attention of the A.H.A. trustees with the request that they consider helping the hospitals of the District.

Pending National Legislation Affecting Hospitals Outlined

The effect of sugar rationing on hospitals and other national legislation was the subject of a report by Dr. Bert W. Caldwell to the presidents' and secretaries' conference in Chicago last month. The average sugar consumption of hospitals during the last three years was between 83,000,000 and 86,000,000 pounds, he reported, or about 74 pounds per bed per year, including the consumption by employees.

A bill has been introduced by Senator Claude Pepper of Florida to appropriate \$600,000,000 for the care of victims of bombing or other war activities. This bill will probably cover the expenses incurred on this account by hospitals.

Another bill by Representative Downes would provide for old age pensions for hospital employees without putting any tax upon the hospitals themselves. Doctor Caldwell expressed hope that this bill would pass.

Doctor Caldwell reported that the situation regarding price ceilings on hospital products was not yet clarified.

Puerperal Mortality Reduced

A startling reduction in puerperal mortality in Philadelphia from 60 deaths per 10,000 live births in 1931 to 23 deaths in 1940 is revealed in the ten year report of the committee on maternal welfare of the Philadelphia County Medical Society published last month. Most of the reduction occurred after 1936 when courtesy staff regulations drawn up in accordance with the standards of the American College of Surgeons were adopted by nearly every hospital in the city doing obstetric work. As the maternal mortality decreased fewer babies were stillborn, indicating that the improved safety of mothers was not purchased at the expense of the infants.

Final Quarter of 1941 Reported Largest in Service Plans' History

The largest single quarter's enrollment in the history of the Blue Cross movement was recorded for the final quarter of 1941 when one million persons came under the protection of the plans, bringing the total enrollment of the 67 approved plans to just under 8,500,000 persons. The total net gain in membership of the approved plans during the year was 2,500,000 participants.

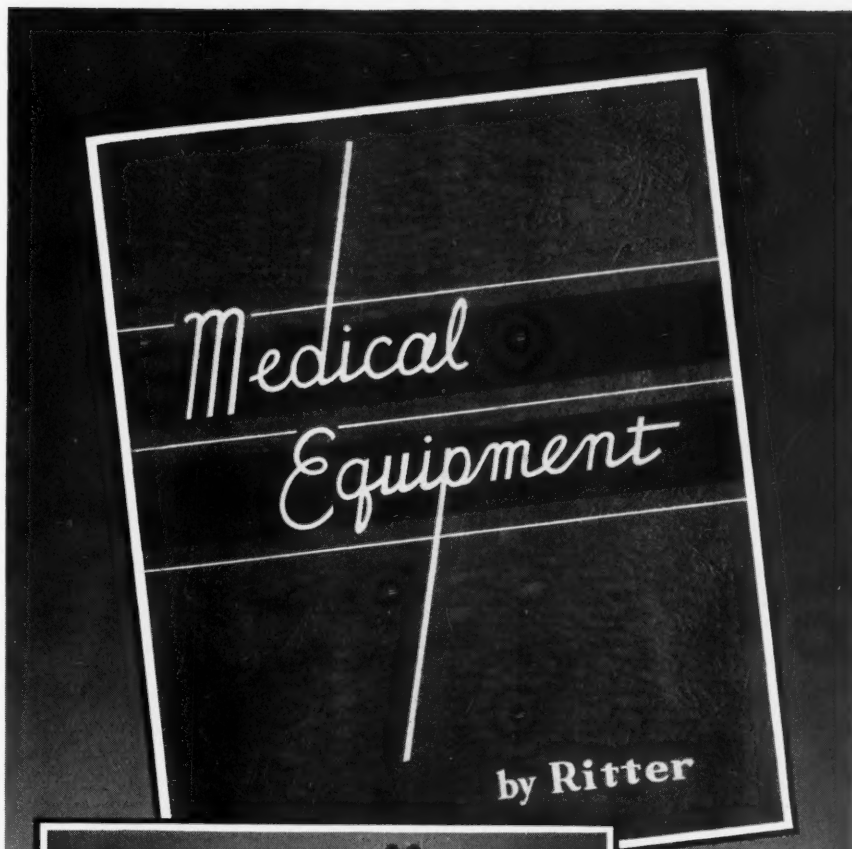
The extent to which Blue Cross plans are reaching family members was indicated by the fact that proportionately more family participants than subscribers were enrolled during 1941 than during any previous year. The percentage of family participants increased from 49 per cent of all participants in 1941 to 52 per cent on Jan. 1, 1942. On Jan. 1, 1937, there was only 37 per cent family participants.

By far the largest gain in total membership of any plan was the 487,000 added by the Michigan plan. Cleveland was second with 161,000, followed by Pittsburgh with 143,000, Chicago with 127,000 and Cincinnati with 119,000. Eight plans gained from 50,000 to 100,000 members during the year, namely, New Jersey, Boston, New Haven, Philadelphia, St. Louis, St. Paul, Providence and Buffalo. Eleven plans gained from 25,000 to 50,000 members. There were eight plans that more than doubled their enrollment during 1941 and 17 that showed an increase of between 50 and 100 per cent.

The nine largest plans on January 1 accounted for 58 per cent of the total enrollment in all plans and the 19 largest plans had 79 per cent of all enrollment. With only three exceptions, Chapel Hill, N. C., Washington, D. C., and Baltimore, all of the 19 largest plans are in the eastern or middlewestern states.

A.H.A. Collects Inclusive Rate Data

The inclusive rate committee of the A.H.A. has appealed to all hospitals that have inclusive rates in effect to send in a set of their rate schedules, the key to them, a brief summary of the methods followed in changing over from conventional to inclusive rates, a list of the problems encountered when the idea was presented to the trustees and medical staff, particularly to roentgenologists, medical anesthetists or pathologists, and a summary of reasons for adopting the inclusive rate. Any hospitals that have abandoned the inclusive rate are also requested to send similar information, adding a list of reasons for abandoning the plan. The committee is headed by J. V. Class, University Hospitals of Cleveland.



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Coal and Coke Restrictions Are Relaxed for Large Users

Large users of coal and coke, especially utilities and industrial users, are being urged by the W.P.B. Division of Industry Operations to build up their inventories as much as possible to avoid the danger of having to suspend operations in case of an emergency.

General Inventory Order M-97, issued February 13, revokes the inventory restrictions imposed by Priorities Regulation No. 1 insofar as they apply to coal and coke. The order will enable large users to take advantage of the fact that there is at present considerable excess production of coal and coke for distribution.

Inventory restrictions are relaxed for coal and coke only. Inventories of all other materials must be kept to a practicable working minimum in accordance with the terms of Priorities Regulation No. 1.

Volunteers to Aid Hospitals

Coordination and expansion of services of women volunteer aids in hospitals of New York City are being undertaken by the United Hospital Fund. Mrs. Kenneth S. Walker has been appointed to act as liaison officer to relate the activities of the volunteers to the civilian defense program.

Medical Colleges to Meet Emergency Needs With Accelerated Schedules

Under the plan to provide, as quickly as possible, additional doctors to take care of present needs, five medical colleges of New York City have initiated an accelerated program of study.

Columbia College of Physicians and Surgeons, Cornell University Medical College, Long Island College of Medicine, New York Medical College and New York University College of Medicine have formulated plans to conduct regular work during the summer months.

The new schedules adopted in these institutions will make it possible for the student to cover a full medical course in thirty-six months instead of the present distribution over forty-eight months. Although the course is practically continuous throughout the year, short vacations will be given between each two of the four terms.

There is to be no reduction in the amount of time the student devotes to his training, however, and there will be no relaxation in teaching standards.

The accelerated schedule in New York City, alone, will make it possible to graduate approximately 450 more doctors in the three year period than under the conventional plan.

New York Hospital Dedicates Professional Service Building

The new six story memorial building of the Hospital for Joint Diseases, New York City, was dedicated on the afternoon of February 7. The new building will house the hospital laboratories, the blood plasma bank, voluntary services, occupational therapy department, the library, physical therapy and x-ray departments and the social service department.

Part of the funds for the professional service building were donated by Mr. and Mrs. John Polachek in memory of their daughter, Melanie Polachek Courmand.

Service Plan Distributes Health Posters and Emblems

Blue Cross health defense posters, prepared especially for display in defense plants throughout the state, are being distributed by the Massachusetts Hospital Service. Paul G. Richter, director of the Department of Public Relations, reports that the posters are being well received.

Distribution of a safety driving emblem is another public relations project of Massachusetts Hospital Service. Approximately 15,000 of these little stickers have been distributed throughout Massachusetts.

The steel and equipment used in making our gas cylinders is needed for bombs, torpedoes, etc. That means we must serve our customers without benefit of new cylinders, since present government regulations restrict production. Our usual good service can be maintained easily enough if you, our customers, will lend us your assistance. Here are three ways you may help:

1. Order more frequently but in smaller quantities.
2. Return to us the same number of empty cylinders as the number of full ones you order.
3. Check your stock and return all excess cylinders not now in use.

Our production of gas is ample for everyone and if you will help us in these ways, we can continue to supply you with all your normal requirements and also do our part for National Defense!

"Buy With Confidence"



PURITAN DEALERS IN MOST PRINCIPAL CITIES

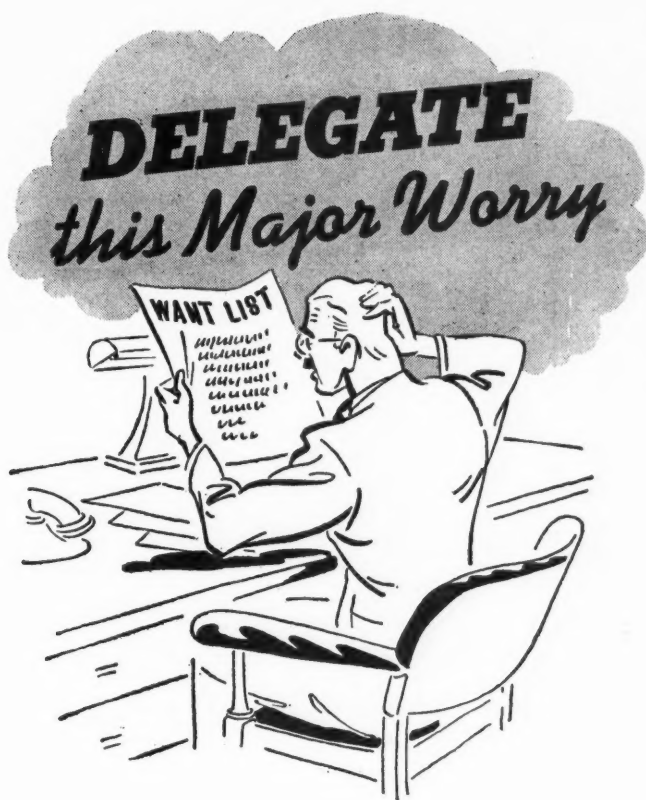


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"Puritan Maid" Anesthetic, Resuscitating Gases and Gas Therapy Equipment

BALTIMORE BOSTON CHICAGO ST. PAUL DETROIT
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FOR more than a quarter of a century we have been diligently engaged in the task of searching out dependable sources of supply for everything needed by the hospital, other than food and drugs.

War demands have, of course, made serious inroads into manufacturing output in all lines. Some lines have been taken off the market altogether. Others are being drastically restricted. We are surrounded by production limitations. This calls for continuous, ever-vigilant scrutiny of production sources . . . what they can make, and how much they can make.

So far, the hospital field has not been seriously affected. While it is true that some items have had to be replaced with "alternative" merchandise . . . and this trend will probably INCREASE as time goes on . . . Will Ross has been able to maintain substantial stocks of most essential hospital supplies and equipment. Locating new and satisfactory manufacturing sources and maintaining a steady stream of supplies is primarily a task for your hospital supply house. And one of the BIG services Will Ross is prepared to render today is to relieve you of this major worry.

We invite you to make greater use of our facilities than ever before. DELEGATE as many of your "supplies and equipment" worries to us as the situation permits.

WILL ROSS, Inc.

QUALITY HOSPITAL SUPPLIES

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Full Red Cross Program Begun at Mercy Hospital

A full Red Cross program as part of its war effort was instituted during the second week of February at Mercy Hospital, Chicago. The entire membership of the Mercy Hospital auxiliary, which applied for a charter to act as a separate unit of the Red Cross for production work, is devoting one full day a week to the making of bandages, layettes and knitting. Three first-aid classes are held each week under the direction of Dr. Janet Townes, staff doctor.

The hospital also plans to have two fully equipped mobile units for emer-

gency use, manned by the medical personnel; members of the auxiliary have volunteered to drive the cars and ambulances for these units.

A.C.S. Changes Meeting Place

The American College of Surgeons announced that because of the war the thirty-second annual Clinical Congress and twenty-fifth annual Hospital Standardization Conference will be held in Chicago, October 19 to 23, instead of in Los Angeles, as originally planned. Headquarters will be at the Stevens Hotel. The programs of both meetings will be based chiefly on war-time activities.

Representatives Prefer General Indigent Law

Too close adherence to the Ohio plan of compensating hospitals for the care of indigent victims of auto accidents was decried by several Ohio representatives at the recent meeting of presidents and secretaries.

Under the Ohio law the burden of proving indigency is on the hospital, Dr. Fred Carter pointed out, and this involves not only proving indigency at the time of hospitalization but also indefinitely in the future.

Representatives of the Minnesota Hospital Association reported that they have obtained a law under which the local county must assume the cost of caring for any indigent auto accident victims. In New York State the public welfare law takes care of the situation adequately and special laws for various classes of indigent persons are not needed, according to J. U. Norris of Women's Hospital, New York City.

Mr. Norris pointed out that the voluntary hospitals in New York State had fought vigorously against special legislation affecting city and county hospitals only, whenever they opposed its possible application to voluntary hospitals. Their experience is that such laws are readily extended to include the voluntary hospitals.

Massachusetts reported that two members of the advisory board to the state nursing board are appointed on nomination of the state hospital association. The advisory board in Massachusetts is the body charged with basic policy decisions. New York, Ohio, Wisconsin, Michigan, Tennessee, and Missouri are among other states in which hospital administrators have membership on the state nursing board.

Many states reported that hospital licensing bills had been either introduced or passed recently. One is now before the legislature in Kentucky. Minnesota's bill went into effect on January 1, and Massachusetts has just passed its licensing bill.

Utah Names Association Heads

Dr. George N. Curtis, superintendent of Salt Lake General Hospital, Salt Lake City, was reelected president of the Utah State Hospital Association at the recent convention. John H. Zenger, assistant superintendent of the Latter Day Saints' Hospital, Salt Lake City, is secretary of the association.

Old Home Becomes Hospital

The 40 room home known as the David Luke Estate in southern Tarrytown, N. Y., has been purchased by the Tarrytown Hospital board of directors for conversion into a 120 bed hospital.



It Cleanses. It Lubricates ...in one simple bathing

YOUR nurses cut infant bathing time in half when they use Baby-San, for Baby-San eliminates the need for oiling the infant's skin. In short, the Baby-San bath is a complete bath, requiring no additional lubricants.

This purest liquid castile soap contains the highest possible concentration of top-grade oils. Hence, as Baby-San cleanses, it also lubricates... leaves a safety film of oil to keep the skin free from superficial dryness or irritation. That's why a Baby-San bath leaves the baby soothed... comfortable.

You can buy no purer or more economical soap than Baby-San—the choice of 65% of the nation's nurseries.

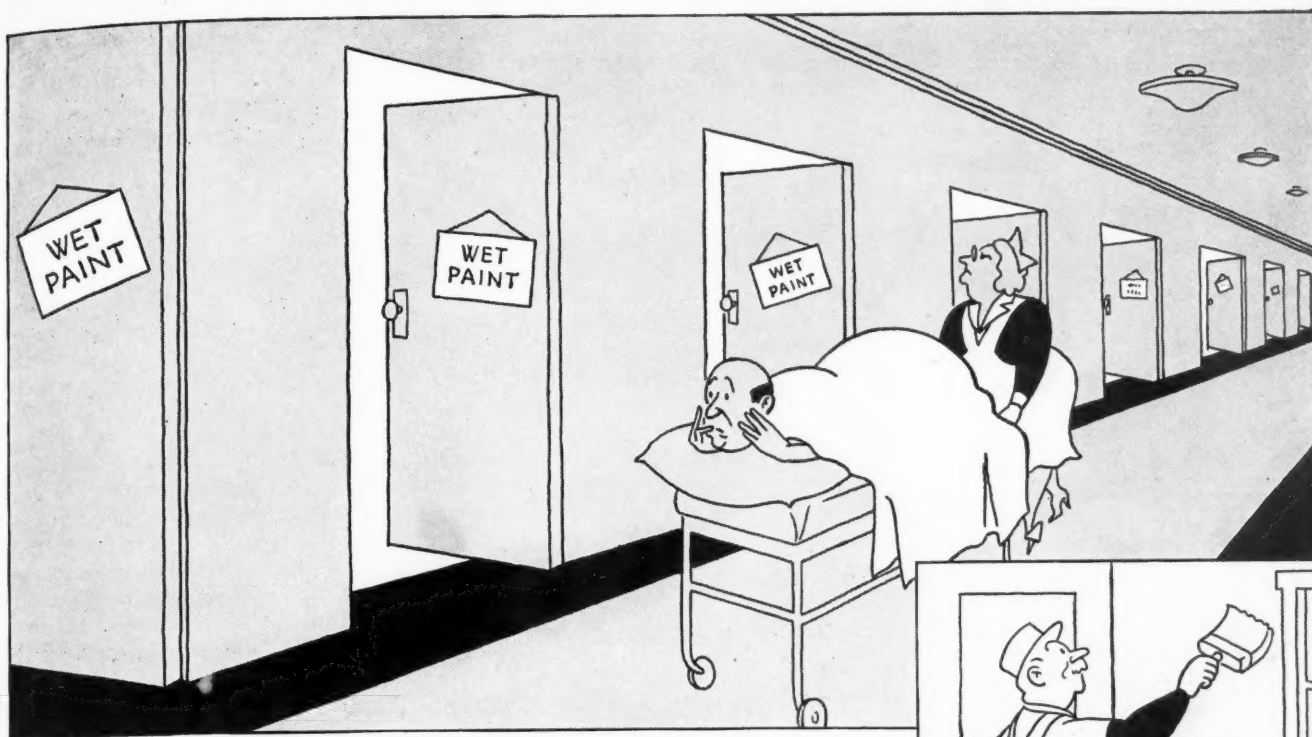
THE BABY-SAN DISPENSER

The Baby-San Portable Dispenser holds one pint. Dispenses just the right amount of soap, thus preventing waste. Easily sterilized and weighted so that it cannot tip over. Dispenser furnished free to quantify users of Baby-San.

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"WET PAINT" TAKES THE PLACE OF PAYING PATIENTS...

"Wet Paint" or Patients—that has been a problem in hospitals until TEXOLITE "330," the new, fast mixing, fast painting, fast drying paint came into the market.

TEXOLITE "330" permits you to put idle rooms back to work sooner. It is washable. In most cases, when applied over old paint, it requires no priming, no sizing. It can cut your wall and ceiling painting costs from 25% to 40%.

A USG paint field-representative will gladly make a survey and recommendations with no obligation. Write or telephone the nearest USG office, or your local dealer.

TEXOLITE "330"

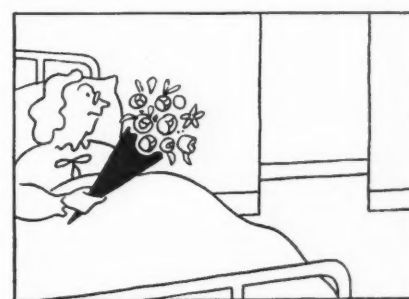
Keeps Hospital Rooms at Maximum Occupancy



TEXOLITE "330" goes on fast



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TEXOLITE "330" leaves no disagreeable paint odor



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*This famous trademark identifies products of United States Gypsum Company
—where for 40 years research has developed better, safer building materials.*

PAINT • PLASTER • LATH • WALLBOARD • INSULATION • ROOFING

Obstetric Congress Will Stress Mortality Control

The hospital administrator's part in controlling maternal and infant mortality will play an important part in the program of the meeting of the American Congress on Obstetrics and Gynecology to be held in St. Louis April 6 to 10. Hospital sessions will be under the direction of Dr. R. C. Buerki, dean of the Graduate School of Medicine of the University of Pennsylvania, and will deal with economic aspects of maternal care, good maternity service in general hospitals, maternal care in rural hospitals and clinics, hospital nurseries and

maternity regulations. Other sessions of interest to hospital people will be on the nursing and public health aspects of maternal care.

Celebrates Golden Anniversary Week

Celebrating fifty years of hospital service, Protestant Deaconess Hospital, Evansville, Ind., set aside the week of February 16-22 as anniversary week. Special programs for each day included prominent speakers, daily radio broadcasts direct from the hospital, an anniversary film and open house on Saturday, February 21. Albert G. Hahn is administrator of the hospital.

Bulletin on Mental Hospitals Reports Service Deficiencies

Important deficiencies in the service of some state mental hospitals are pointed out in a report by the U. S. Public Health Service published last month under the title "A Study of the Public Mental Hospitals of the United States, 1937-1939."

Without specifically naming the states concerned, the report points out that in some states the chief qualification of the hospital administrator is "one so closely related to some skillful partisan politician that he can be depended on to favor the interests of the party." Generally, however, the chief executive officer is a well-qualified physician, even though there are places in which the importance of special psychiatric training seems not to be recognized.

The total capital value of all state mental hospitals is estimated in the report at \$570,000,000.

Ambulance Cradle Introduced

A collapsible cradle or support that makes possible the rapid conversion of light delivery trucks and station wagons into ambulances was introduced last month by the president of the British and American Ambulance Corps. Weighing only 75 pounds and ruggedly constructed of wood and strap steel with an eye toward priorities, the stretcher cradle may be folded compactly when not in use. William V. C. Ruxton, president of the British and American Ambulance Corps, said that patents had been applied for in the name of the corps so that the cradle cannot be exploited commercially. The corps is prepared to have the carriers manufactured in quantity for resale to civilian defense officials and to private organizations on a nonprofit basis.

Wisconsin Association Elects Officers

Officers of the Wisconsin Hospital Association, elected at the annual meeting in Milwaukee on January 22, are: president, Rev. H. L. Fritschel; first vice president, Sister M. Augusta; second vice president, George F. Meyer; secretary-treasurer, Dr. E. T. Thompson. Dr. H. M. Coon, superintendent of the University of Wisconsin General Hospital, Madison, was elected director of the association to fill the unexpired term of Dr. Robin C. Buerki; Joseph C. Norby was reelected director.

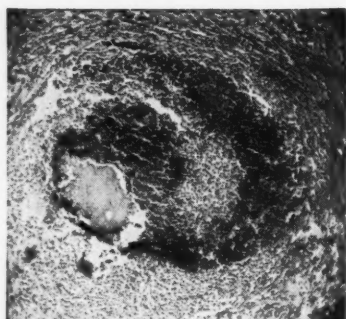
Addition Increases Bed Capacity

The new \$500,000 addition to St. Nicholas Hospital, Sheboygan, Wis., was opened to the public on February 11, increasing the hospital's bed capacity from 149 to 255, with an emergency capacity of 300 beds.

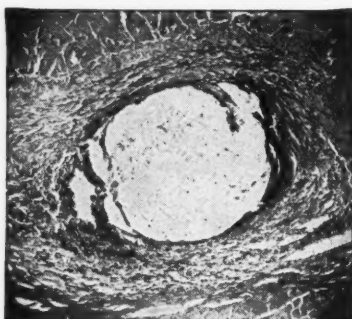


A NEW UNIVERSAL SUTURE

—truly non-reactive, non-capillary,
guaranteed physiologically inert



Plain catgut suture at two weeks; note absorption and inflammation



Plastigut suture at two weeks; no reaction, inflammation or absorption

An approach toward the ideal suture material is found in Plastigut Surgical Sutures, clinically developed by Dr. Joseph E. Bellas of Peoria. Plastigut is composed of synthetic plastic materials especially chosen with regard to suture requirements. Histological and clinical evidence proves it nonreactive, noncapillary and nonabsorbable. At any given stage, repair is more advanced in cases in which Plastigut is used than in those in which catgut is used. This is to be expected, since with Plastigut there is no irritating inflammatory and exudative reaction to hinder repair. There is no danger in leaving Plastigut in place; after two years it has been found intact, virtually a part of the supporting structures.

Plastigut is used in smaller sizes, due to its greater tensile strength. Plain Plastigut is offered in sizes No. 00, 4-0 and 5-0. Black, for skin work, is offered in sizes No. 0, 4-0 and 5-0. Size No. 00 is recommended for all general work, size No. 4-0 for ties, size No. 5-0 for plastic surgery and No. 0 for heavy tension sutures.

PRICE—Plastigut Sutures in Sterile Tubes, length 60 inches, all sizes. Dozen, \$3.00. Gross, \$29.50. Three-gross lots, per gross, \$27.50.

References to the literature provided on request.

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HERE'S what you've been waiting for—and Wyandotte supplies it!

This great new Wyandotte Product will help you eliminate poor color washing, both on light colors and on "fugitives."

And Wyandotte Color-Spark is safe. It is mild and leaves the fabric with a soft, fine feel. It is ideal for washing all washable colored fabrics such as: Bedspreads, curtains, slip covers, uniforms, table linen and also fugitives that are washed in the wheel.

Get in on the ground floor. See your Wyandotte Laundry Serviceman at once. He'll tell you all about Color-Spark, proper methods for using it and how to obtain best results. There is no obligation.

• **FOR BLANKETS—WYANDOTTE STERI-CHLOR** quickly and easily removes odors at very low cost. No extra time or labor required. Will not harm colors or most delicate materials.



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Veterans Will Have New Hospital at Health Springs

Plans for construction of a new hospital at Saratoga Springs, N. Y., to make the health spa available to the nation's ailing veterans were disclosed by Brig. Gen. Frank T. Hines, Veterans' Administrator, recently. The new facility, General Hines said, would release many hospital beds now occupied by veterans being treated for heart and circulatory disorders and rheumatic conditions that would be benefited by the curative properties of the spring waters at Saratoga.

Other improvements planned by the Veterans' Administration are moderniza-

tion of existing buildings at the Bronx facility and construction of a new 400 bed hospital in Pennsylvania.

Two Hospital Units Dedicated

January saw the dedication of two new hospital units, one in Milwaukee and the other in Santa Monica, Calif. Donations from 3000 citizens in and around Milwaukee made possible the new maternity pavilion of Milwaukee Hospital, dedicated January 11. On January 4, Santa Monica Hospital was formally dedicated as a unit of the Lutheran Hospital Society of Southern California, representing a trust gift to the society of property worth \$350,000.

Council Organizes Plan for Collecting Monthly Payments on Accounts

A hospital acceptance corporation for the collection in monthly payments of unpaid hospital accounts has been set up by the Chicago Hospital Council, according to an announcement made last month. The corporation has actually been in existence on a trial basis for several months.

Under the plan the corporation will take over the responsibility of collecting any unpaid balance that the hospitals wish to turn over to it. The patient pays a service fee of \$1 plus 5 per cent per annum on the total amount of the note, which is equivalent to an interest rate of approximately 10 per cent on the actual amount of the obligation outstanding.

In addition, the corporation collects from the hospital 3 per cent of the amount of the obligation. It is stated that this amount is less than hospitals usually spend in their collection efforts and much less than they must spend if they use commercial collection agencies.

thanks



—for your acceptance of our new and improved Neo Germolyptus. It has more than repaid us, in "pride-of-something-well-done," for the years of research that went into its development.

The improved Neo Germolyptus' success has been instantaneous, due, undoubtedly, to its crystal clear solubility—its stability in solution—and its pleasant, slightly perfumed odor.

Remarkably little skin irritation is evident, though Neo Germolyptus is more than three times stronger than U.S.P. Cresol.

Its uses range from the sterilization of surgical instruments to the disinfecting of hospital floors, walls, etc. *Because of the present shortage of alcohol, many hospitals are using Neo Germolyptus in a one-percent solution for hand rinse in "scrub up."*



Two samples of Neo Germolyptus will be sent on request—one for trial in surgery and one for trial in "O.B." Full instructions plus clinical data obtained from independent analytical tests run on all the important forms of bacteria will be enclosed.

MIDLAND CHEMICAL LABORATORIES
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Dubuque, Iowa, U. S. A.

Reforms for I. H. A. After War Discussed in England

Discussion of the possibilities of reforming the International Hospital Association after the war is now being carried on in England. At a recent meeting of the British section of the I.H.A., Professor A. T. Jurasz of the Polish Faculty of Medicine, which is housed during the war at the University of Edinburgh, urged that the I.H.A. be reconstituted after the war with its membership limited, at the beginning, to nations that possess analogous ideals of culture and human affairs and are at present fighting for such ideals.

He proposed also that the association should take steps: (1) to improve the financial position of hospitals; (2) to effect an interchange of personnel, both lay and medical, among the hospitals of the various countries; (3) to provide a six months' residency for medical graduates of different countries on an exchange basis; (4) to organize the exchange of medical specialists; (5) to exchange hospital nurses, and (6) to make *Nosokomeion* a much greater influence in the interchange of advanced hospital thought.

New Texas Council Formed

At a recent meeting of the newly organized Hospital Council of Fort Worth, Tex., the following officers were elected: president, A. C. Seawell, City-Council Hospital; vice president, W. P. Capps, Cook Memorial Hospital, and secretary-treasurer, Mrs. Maud McKamy, Fort Worth Children's Hospital.



HOW YOU CAN SAVE RUBBER

for National Defense

Today, with our country actively engaged in the war, it becomes necessary for the civilian population to heed the call of our government and help in the conservation of many vital materials. First on this conservation list stands the one commodity so important to us all—RUBBER. By following the suggestions listed below you will be doing your country and yourself a great service—you will be helping to SAVE RUBBER, one of the most important of these vital materials.

1 **STERILIZATION:*** For greater efficiency delegate ONE PERSON, fully qualified, to oversee the important job of sterilizing all gloves. Make certain, by frequent checking, that the autoclave is in perfect working order and that the proper amount of water is present at all times.

2 **DETERIORATION:** Although Latex Gloves are guaranteed for three years, overstocking at the present time will create a severe shortage. If you have Pure Gum Gloves in stock use them first as they can be stored safely for only ONE YEAR. Date all boxes and use the oldest gloves first.

3 **SIZE OF GLOVES:** For longer glove life be certain that your surgeons are wearing gloves that FIT. Using gloves larger or smaller than necessary cuts down the period of usefulness in active service.

4 **STANDARDIZE:** Try to create a standard in the type and weight glove needed by your staff. This will help the person in charge of buying as well as your Dealer and will help also in avoiding overstocking.

5 **PROPER STORAGE:** In storing the stock of gloves you must necessarily have on hand at all times, be sure the atmospheric condition of your storage room is such as to eliminate unnecessary deterioration. Keep all gloves, at all times, in a COOL place.

6 **OVERSTOCKING:** To avoid a rubber shortage it is important that you DO NOT overstock. Check your past records and stock only the sizes and amounts absolutely necessary to insure efficient operation. Do not order extremes in size unless in constant use.

7 **REPAIRS:** Whenever possible repair all gloves with patches and keep them in active service as long as possible. There are many places in every hospital where patched gloves will do the job just as well as new ones.

8 **CARE IN PUTTING ON AND REMOVING GLOVES:*** In many cases the life of surgeons' gloves can be extended if the proper care is taken when the gloves are being put on or taken off. The wrist of any glove is its most vulnerable spot, so watch finger nails carefully—they can cause damage.

*Complete Instructions On Correct Sterilization and the Safe Method of Putting On and Taking Off Gloves Will Be Sent on Request

 **Wilson**
RUBBER COMPANY

THE WORLD'S LARGEST MANUFACTURERS OF RUBBER GLOVES
CANTON . . OHIO

Fire Bomb Control Subject of Educational Film Release

For the training of civilian defense volunteers and the public in general "Fighting the Fire Bomb," an educational film, has been released by Transfilm Inc., New York City.

One nontheatrical release, available in the 16 mm. size, is being used by state and local civilian defense training organizations throughout the United States to teach what incendiary bombs are and how to combat them in the event of air attacks. Copies of the film are available through Transfilm Inc. and a limited number are being sent out directly from the Office of Civilian Defense.

Campaign Surpasses Objective

With a subscription surpassing its objective by \$3047 the Wesson Memorial Hospital, Springfield, Mass., closed its fund raising campaign last month. The fund will provide for the erection of a technical unit in which an emergency department, laboratories, x-ray and physical therapy departments, operating suite and pediatric department will be housed. The hospital's modernization plans also include a new oil heating system and two elevators, in addition to the enlargement of existing accommodations for patients within the present building.

"It's a Man's World"

February 9, 1942

Sirs:

Until yesterday, when an infant of the feminine gender was born at this hospital, we had had an unbroken sequence of 15 births of boys for 1942.

Though this information may or may not represent a national record, it is a grand effort during war time to keep the battlefield supplied with man power.

F. A. Stewart
Office Manager

Mason City Hospital
Mason City, Wash.

College Establishes Nurses' Aid Course

Beginning with the second semester, the University of South Carolina established an accredited Red Cross volunteer nurses' aid course. With the opening of the course this university becomes the first institution of its kind to offer such an opportunity to its student body. The course carries three semesters hours' college credit and requires thirty-four hours of classroom instruction and forty-five hours of floor duty at Columbia Hospital, Columbia, S. C.

Boston Raises \$7,645,000 for Local Social Agencies

A total of \$7,645,000 was raised in Boston in a joint campaign for war and civilian social agencies that ended early in February. This is reported to be the largest total amount ever raised in any single fund raising campaign in an American city.

Two million dollars will go to the American Red Cross and the U.S.O. and the remainder will be divided among 200 hospitals and community agencies. Probably about 50 per cent of the nonwar funds raised will go to hospitals.

Issues Pamphlet on Volunteers

"Volunteers in Health, Medical Care and Nursing" is the title of a 12 page pamphlet recently issued by the U. S. Office of Civilian Defense with the cooperation of the Office of Defense Health and Welfare Services. The manual discusses the need and opportunities for volunteer service, the qualifications and duties of various types of volunteers and information about instruction and organization of volunteers. Of interest to hospitals particularly are the descriptions of volunteers as assistants in hospitals, clinics, laboratories and libraries as medical social service assistants, nurses' aids, nutritionist assistants and as assistants in occupational and physical therapy.

**R/Prescribed by Leading
Hospitals Everywhere**

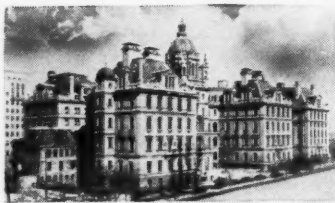
HOSPITALS throughout the country—like these shown and the Mercy Hospital, San Diego, the Mother Cabrini Hospital in New York—use AMERICAN Heating Equipment and "Standard" Plumbing Fixtures. These two lines include products to meet many needs...styled for utmost utility, sanitation, safety and appearance. If you are considering building or modernizing, write today for full information.

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Cast Iron & Steel Boilers & Furnaces for Coal, Oil, Gas • Radiators
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Plumbers' Brass Goods • Winter Air Conditioning Units • Coal &
Gas Water Heaters • Oil Burners • Heating Accessories



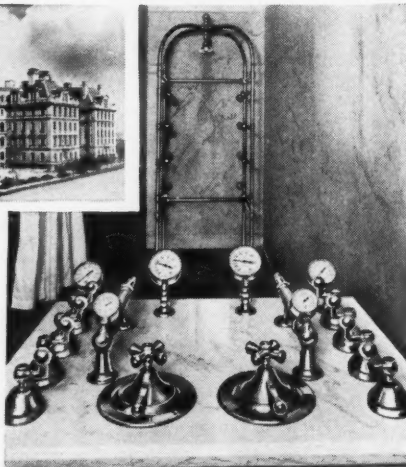
St. Luke's Hospital,
New York City



Cornell Medical Center, New York City



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Hydrotherapeutic Control Table and Shower
at St. Luke's. Table is finest marble fitted
with dial thermometers and automatic,
thermostatic mixing valves. Control tables
fit practically any specifications.



Memorial Hospital, New York City

AMERICAN HEATING EQUIPMENT
COST NO MORE THAN OTHERS
"Standard" PLUMBING FIXTURES

★ ★ DEFEND OUR COUNTRY. ENLIST NOW IN THE U. S. REGULAR ARMY ★ ★

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subject to explosion hazards from the building up of STATIC ELECTRICITY?

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concerned with maintenance of sanitary floor conditions...precautions against spread of ATHLETE'S FOOT?

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faced with the danger of explosions from STRUCK SPARKS on floors?

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seeking floor-resistance to damage from FATS, SUGARS, CERTAIN FOOD WASTES... DENTING, DUSTING?

Practical methods of making tests on a Robertson Hubbellite Floor to determine whether or not it can solve these problems for you, are described in a new circular sent upon request. Address:

H. H. ROBERTSON CO., Farmers Bank Bldg., Pittsburgh, Pa.

ROBERTSON HUBBELLITE FLOORS

**A CUPRIFEROUS
CEMENT**



**MONOLITHICALLY
APPLIED**

Accrediting Committee to Publish an Approved List of Health Resorts

An accredited list of American health resorts will be published by the American Medical Association on the basis of a set of standards that has been drawn up by a committee on this subject headed by Dr. Walter S. McClellan of Saratoga Springs, N. Y.

Health resorts wishing to be approved are asked to make formal application and to submit copies of all recent advertising, descriptive booklets and similar material.

Western Assembly Postponed

As one measure to conserve the time and effort of hospital personnel in the western coastal areas, the board of trustees of the Association of Western Hospitals announces that the sixteenth annual assembly of the association, scheduled to be held in Seattle, Wash., April 13 to 16, will be postponed indefinitely.

"Defense" Dietetic Convention Theme

"Defense—the Job at Hand" has been selected as the convention theme of the annual meeting of the New York State Dietetic Association to be held May 7 and 8 at the Hotel Utica, Utica, N. Y.

March 11-13—New England Hospital Assembly, Hotel Statler, Boston.
March 20—Louisiana Hospital Association, Washington Youree Hotel, Shreveport.
April 6-10—American Congress on Obstetrics and Gynecology, Jefferson Hotel, St. Louis.
April 9-11—Southeastern Hospital Conference, Peabody Hotel, Memphis, Tenn.
April 14—Alabama Hospital Association, Jefferson Davis Hotel, Montgomery.
April 15-17—Pennsylvania Hospital Association, William Penn Hotel, Pittsburgh.
April 16-18—Carolinas-Virginias Hospital Conference, John Marshall Hotel, Richmond, Va.
April 21-23—Ohio Hospital Association, Neil House, Columbus.
April 23-24—Mid-West Hospital Association, Hotel Continental, Kansas City, Mo.
April 23-24—Kentucky State Hospital Association, Brown Hotel, Louisville.
April 27-29—Iowa Hospital Association, Fort Des Moines Hotel, Des Moines, Iowa.
May 6-8—Tri-State Hospital Assembly, Stevens Hotel, Chicago.
May 6-9—National Tuberculosis Association, Bellevue-Stratford Hotel, Philadelphia.
May 7-8—New York State Dietetic Association, Hotel Utica, Utica, N. Y.
May 7-9—New Jersey Hospital Association, Hotel Dennis, Atlantic City.
May 11—Mississippi State Hospital Association, Jackson.
May 12-16—South Dakota Hospital Association, Hotel Carpenter, Sioux Falls.

Coming Meetings

May 13-17—South Dakota Hospital Association, Y.M.C.A., Sioux Falls.
May 18-22—American Nurses' Association, National League of Nursing Education, National Organization for Public Health Nursing, Biennial Convention, Stevens Hotel, Chicago.
May 20-22—Hospital Association of New York, Hotel Statler, Buffalo.
May 22—Greater New York Hospital Association, New York City.
June 1-6—Purchasing Institute, American Hospital Association, University of Michigan, Ann Arbor.
June 21-28—Accounting Institute, American Hospital Association, Indiana University, Bloomington.
June 3-6—National Executive Housekeepers Association, Detroit.
June 8-12—American Medical Association, Atlantic City, N. J.
June 15-19—Canadian Medical Association, Jasper Park, Alberta.
June 22-26—Canadian Nurses' Association, Windsor Hotel, Montreal, Que.
Aug. 17-21—National Medical Association, Cleveland.
Aug. 24-28—American Dental Association, Boston.
Oct. 12-16—American Hospital Association, St. Louis.
Oct. 19-22—American Dietetic Association, Detroit.
Oct. 19-23—American College of Surgeons, Hospital Standardization Conference, Stevens Hotel, Chicago.
Oct. 26-31—American Public Health Association, St. Louis.

Speakers scheduled to discuss various phases of the problem are: Nelda Ross, Presbyterian Hospital, New York City, and president of the American Dietetic Association; Mary DeGarmo Byran, Co-

lumbia University; Estelle Hawley of the University of Rochester, and Flora Thurston of Cornell University. Jessie Cole of the state department of health is program chairman.

WHY THE CEDARS OF LEBANON CHOSE *this* PARTICULAR FLOOR !



HOSPITAL floors are not ordinary floors. They have certain specific requirements to meet. They must be long-lived, easy-to-maintain, comfortable, and attractive. Armstrong's Linoleum meets all these requirements. And that's why this material was chosen for corridors in Los Angeles' Cedars of Lebanon Hospital.

LONG LIFE—Armstrong's Linoleum is made to last. Its durable surface stands up under hospital traffic. It never requires expensive refinishing.

EASY MAINTENANCE—Armstrong's Linoleum is easy to clean and to keep clean. Routine sweeping along with regular washing and waxing, is all the care that is necessary to keep this floor truly "Hospital-clean."

COMFORT—Armstrong's Linoleum is resilient, which makes it comfortable under-foot. Hospital patients and staff alike appreciate the way it cushions footsteps and muffles sound.

APPEARANCE—Finally, Armstrong's Linoleum is attractive and colorful . . . adds extra good looks wherever it's installed.

Next time you choose a flooring material, investigate Armstrong's Linoleum. Write for your free copy of "How to Modernize Your Floors." Armstrong Cork Company, Floor Division, 1210 State St., Lancaster, Pa.



THE SPOTLESS CORRIDOR you see below is in the Cedars of Lebanon Hospital, Los Angeles, California. It STAYS spotless, too—thanks to the Armstrong's Linoleum on the floor. Platinum Gray (No. 5) Jasper field, with Black No. 27 border.



ARMSTRONG'S LINOLEUM FLOORS

LINOWALL • ASPHALT TILE • ACOUSTICAL MATERIALS

The MODERN HOSPITAL

FOOD GOES FURTHER...STAFF DOES MORE
WITH *Ideal* FOOD CONVEYORS



THE more efficient food service provided by Ideal Food Conveyors brings food to the bedside in its most appealing and nourishing form, avoids food waste and extends the working radius of the food service staff.

Ideal Conveyors are built to last—repair and replacement are not problems. They are ultra-modern—designed in the light of years of experience. They are available in many different models and materials meeting every individual service and budget requirement. Write for complete data.

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IN CALIFORNIA: The Colson Equipment & Supply Company
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Names in the News

Administrators

HAROLD S. BARNES, formerly administrator of the Latter Day Saints' Hospital, Salt Lake City, Utah, is now assistant manager of the Don Baxter Laboratories of Glendale, Calif. The present administrator of the hospital is **J. HOWARD JENKINS**, formerly at Thomas D. Dee Memorial Hospital, Ogden, Utah.

JAY W. DRESSER became assistant director of the Hospital for the Women of Maryland, Baltimore, last month.

W. G. SCHENDEL, administrator and chaplain of the Bismarck Evangelical Hospital, Bismarck, N. D., for the last five years, has resigned to become treasurer and business manager of North Central College, Naperville, Ill.

DR. J. A. STOCKER, staff physician at Missouri State Sanatorium, Mount Vernon, has been appointed superintendent of the institution to succeed **Dr. R. H. Runde**, who resigned recently.

DR. LUCIUS R. WILSON, administrator of the Hospital of the Protestant Episcopal Church, Philadelphia, has been appointed superintendent of Kensington Hospital for Women. He will continue his present duties at the Hospital of the Protestant Episcopal Church.

DR. EDWARD A. WELCH, chief medical officer of the Veterans Administration Facility at Excelsior Springs, Mo., has been named manager of the new Veterans Administration Facility at Marion, Ill. The new hospital is scheduled for completion around April 1.

DR. PHILIP D. BONNET recently became director of Lankenau Hospital, Philadelphia. **SISTER ANNA EBERT** is directing deaconess of the institution.

CLAUDE F. GADDY, formerly superintendent of city schools at Raleigh, N. C., succeeded **M. E. WINSTON** as administrator of Rex Hospital, Raleigh, on February 1.

FRED M. WALKER, has resigned his position as administrator of Charlotte Memorial Hospital, Charlotte, N. C. **DR. ALLAN TUGGLE**, the hospital's radiologist, has been appointed acting administrator in a temporary capacity.

DR. LAWRENCE K. KELLEY, superintendent of Tewksbury State Hospital, Tewksbury, Mass, for the last six years, has resigned his position, effective March 1.

DR. G. D. JOHNSON has resigned as superintendent of Spencer State Hospital, Spencer, W. Va. Doctor Johnson is suc-

ceeded by **DR. HARRY GARRISON**, a former naval physician.

LIEUT. EDWARD H. HEYD, superintendent of Memorial Hospital, Wilmington, Del., has been ordered to report for active Army duty. **JOHN A. MALCOMSON**, office manager of the hospital, has been appointed administrator for the duration of the war.

Department Heads

MARJORIE E. WEBSTER has been appointed head dietitian of St. Luke's Hospital, Bethlehem, Pa., to fill the position left by the resignation of **FLORENCE E. TOMPKINS**.

LESLIE REID, formerly of Presbyterian Hospital, Chicago, has been named comptroller of Albany Hospital, Albany, N. Y. **E. W. JONES**, administrator, announces. The simultaneous appointment of **JOHN SERVICE** as assistant director of the hospital places him in charge of the entire front office division.

PHYLLIS COBURN, director of nurses, Easton Hospital, Easton, Pa., has resigned. **LOUISE SCHROEDER**, formerly director of nurses at the New Rochelle Hospital, New Rochelle, N. Y., has been appointed to succeed Miss Coburn.

Miscellaneous

DAVID H. McALPIN PYLE was elected chairman of the board of trustees of the

Quiet Kent Floor Machines

USE THEM ON YOUR HOSPITAL FLOORS IF YOU WANT THEM TO REFLECT . . . CLEANLINESS . . . SAFETY . . . BEAUTY

RUN THEM AT NIGHT while your patients sleep!

SILENT OPERATION a decided advantage when you wish to clean floors heavily trafficked through the day.

FAST—Operator covers large area per hour.

ECONOMICAL—Machines are sturdily built for long usage and trouble free service.

EASILY OPERATED—due to perfect balance caused by offset motor design.

1. motors 100% enclosed
2. all weight on brush design
3. positive lubrication
4. perfect balance
5. positive gear drive

Made in various sizes to meet your needs.



MODEL D20

MAKE YOUR NEXT MACHINE A QUIET KENT—fully guaranteed

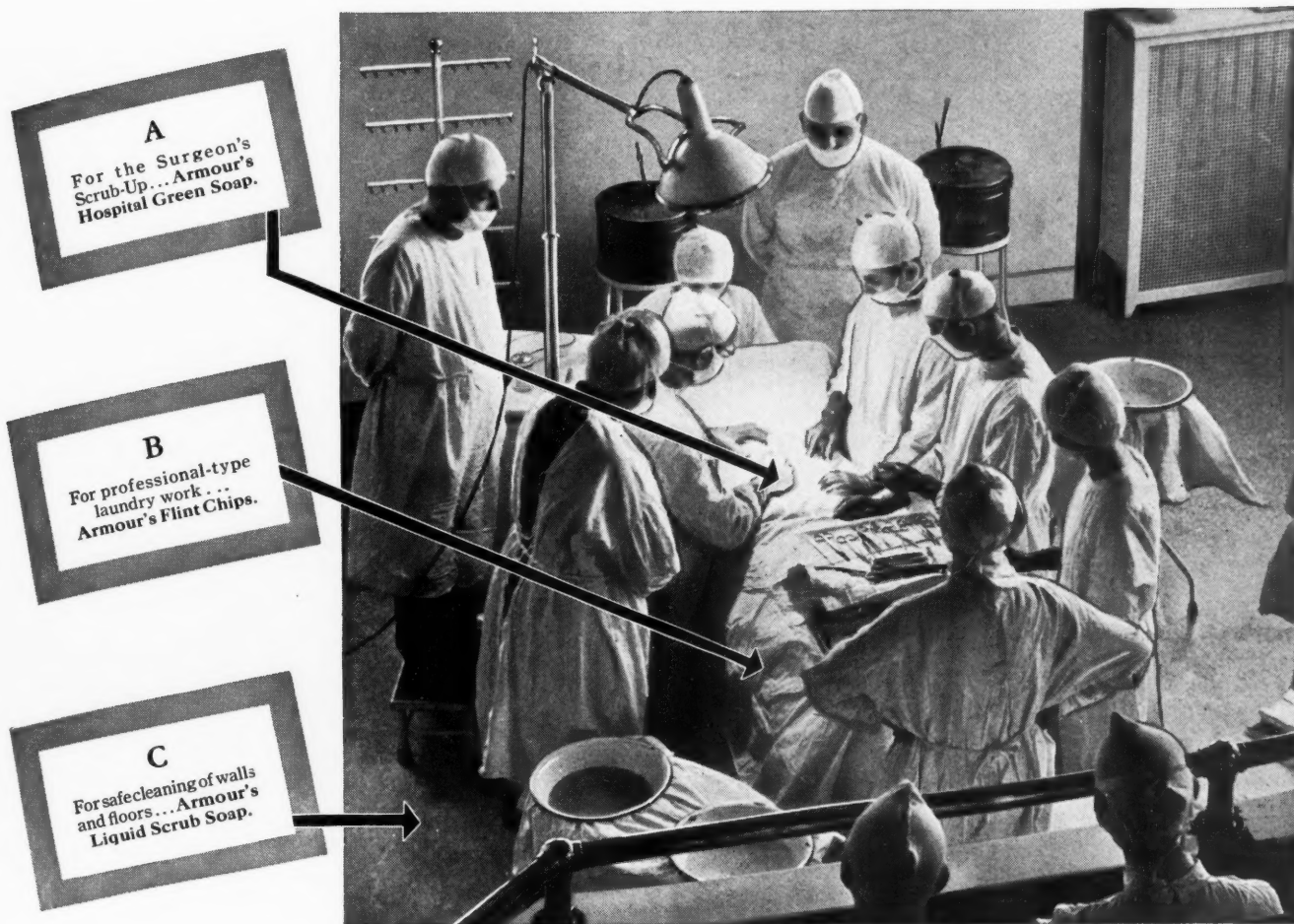
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New York Hartford
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3 Ways

Armour Soaps Meet Your Needs



A

Armour's Hospital Green Soap is a hard jelly, tincture base for the surgeon's scrub-up. The uniform high quality of Hospital Green is assured by Armour's scientific analysis of all raw materials and chemical control of each step of manufacture.

B

Armour's Flint Chips, a high titer, neutral soap widely used by steam laundries, gives hospital laundry managers the professional job they want. Flint assures deeply penetrating, lasting suds that rinse

easily, quickly and turn out sweet-smelling, immaculate white work.

C

There are several reasons why Armour's Liquid Scrub Soap is preferred for the cleaning of floors, painted and enameled walls, varnished wood, linoleum and furniture. Armour's Liquid Scrub Soap is made up of a base which will not injure even the most delicate surfaces... and it saves time because it dissolves immediately.

ARMOUR SPECIALIZES IN SOAPS FOR HOSPITAL USE

Armour has created 21 different soaps

for hospital use. From dainty hand soaps for your patients to heavy duty washing powders for your kitchen—Armour offers you a soap specially designed to provide the maximum in safety and efficiency for each particular need. And you can depend on the uniform high quality of any Armour soap you buy, because the raw materials are chemically analyzed and every step of the manufacturing process is chemically controlled by Armour.

Call or write Armour and Company and a representative will be pleased to show you how Armour's Complete Line of 21 Hospital Soaps can fill your needs with the utmost satisfaction.

ARMOUR AND COMPANY

INDUSTRIAL SOAP DEPARTMENT • 1355 W. 31st STREET, CHICAGO, ILLINOIS

United Hospital Fund of New York at the annual meeting held last month. Mr. Pyle has been president of the organization since 1934. ROY E. LARSEN, who has served as general chairman of the 1940 and 1941 campaign committees, was elected president and DEAN SAGE JR. was named vice president.

DR. LEWIS R. THOMPSON has been named chief inspecting officer of the U. S. Public Health Service, a position newly established in the office of the surgeon general. DR. ROLLO E. DYER will succeed Doctor Thompson as assistant surgeon general in charge of the division of scientific research and as director of the National Institute of Health.

JAMES E. STUART has been appointed executive vice president of the Hospital Care Corporation, Cincinnati, to succeed the late L. D. FOWLER.

RUTH RAWLINGS has been appointed director of public relations at Presbyterian Hospital, Chicago, succeeding Mrs. FLORENCE SLOWN HYDE, who resigned in January.

DR. ROBERT P. FISCHELIS, secretary and chief chemist of the New Jersey Board of Pharmacy has been released for part-time service as chief of the section of medical and health supplies of the Civilian Supply Division of W.P.B. Doctor Fischelis and his staff of specialists will study civilian needs and will plan the

proper allocation of health and medical supplies.

MARY ELIZABETH APPEL has assumed her new duties as executive secretary of the American Association of Nurse Anesthetists.

Deaths

DR. WILLIAM D. CUTTER, Chicago, secretary of the American Medical Association's council on medical education and hospitals, died on January 22 while visiting in Tennessee. DR. F. H. ARESTAD has been appointed acting secretary of the council on medical education and hospitals.

CAROLYN DAVIS, formerly a trustee of the American Hospital Association and at one time a member of The MODERN HOSPITAL editorial board, died recently in Seattle, Wash.

SISTER STELLA MARGARET, superintendent since 1939 of St. Vincent's Hospital, West New Brighton, Staten Island, N. Y., died at the age of 72. Sister Stella at one time served as superintendent of the New York Foundling Hospital, the Holy Family Hospital, Brooklyn, and St. Vincent's Retreat, Harrison, N. Y.

DR. H. A. COPSEY, co-founder of St. Joseph's Hospital, Alliance, Neb., died on January 14. Doctor Copsey served as a captain in the medical corps during the first World War.

Gifts Totaling \$80,000

Received by Two Institutions

Memorial Hospital, Houston, Tex., has been presented with two deep therapy x-ray machines by Mrs. J. W. Neal, Houston philanthropist and member of the hospital board. Mrs. Neal first presented a 220 kv. unit as a contribution to the institution's expansion program. Later, she authorized Robert Jolly, administrator, to announce her intention of presenting the hospital with a 440 kv. machine for cancer treatment. The two machines are valued at \$30,000. Another gift that has recently been announced was a \$50,000 fund presented to Northwestern University, Evanston, Ill., by the families of the late Mr. and Mrs. Charles H. Schweppe. The money will be used to establish a library of films on medical education.

Nurse License Law Changed

As an emergency measure, the New York State legislature has passed and Governor Lehman has signed the Todd Bill, which suspends until one year after the war the requirement that only registered and licensed nurses may be permitted to practice in the state. As a result, the services of 10,000 unregistered nurses can continue to be used during the war period.

Equip with St. Charles Steel Cabinets!

FOR ECONOMY IN COST... FLEXIBILITY IN DESIGN

On every floor—in virtually every room—you have storage or counter needs which can be most economically and efficiently met by St. Charles metal cabinets, sinks and counters. Before you invest, investigate the savings possible with St. Charles Steel Cabinets.

Every problem is different—the installation must be tailored to fit. Standard St. Charles cabinets in

many types and sizes meet most requirements—are readily adaptable to special units.

The smooth, streamlined design and St. Charles "10 test" finish are particularly suited to hospital use, aiding cleanliness and easy upkeep. Work surfaces in porcelain, linoleum, and all standard materials.

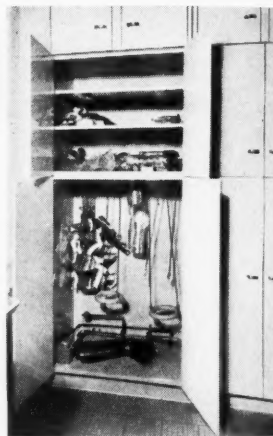
Our engineering and planning service has helped solve the storage and counter problems of many hospitals. It is available to you, without charge or obligation.



Nurses' Station



Delivery Room



Splint Cabinet

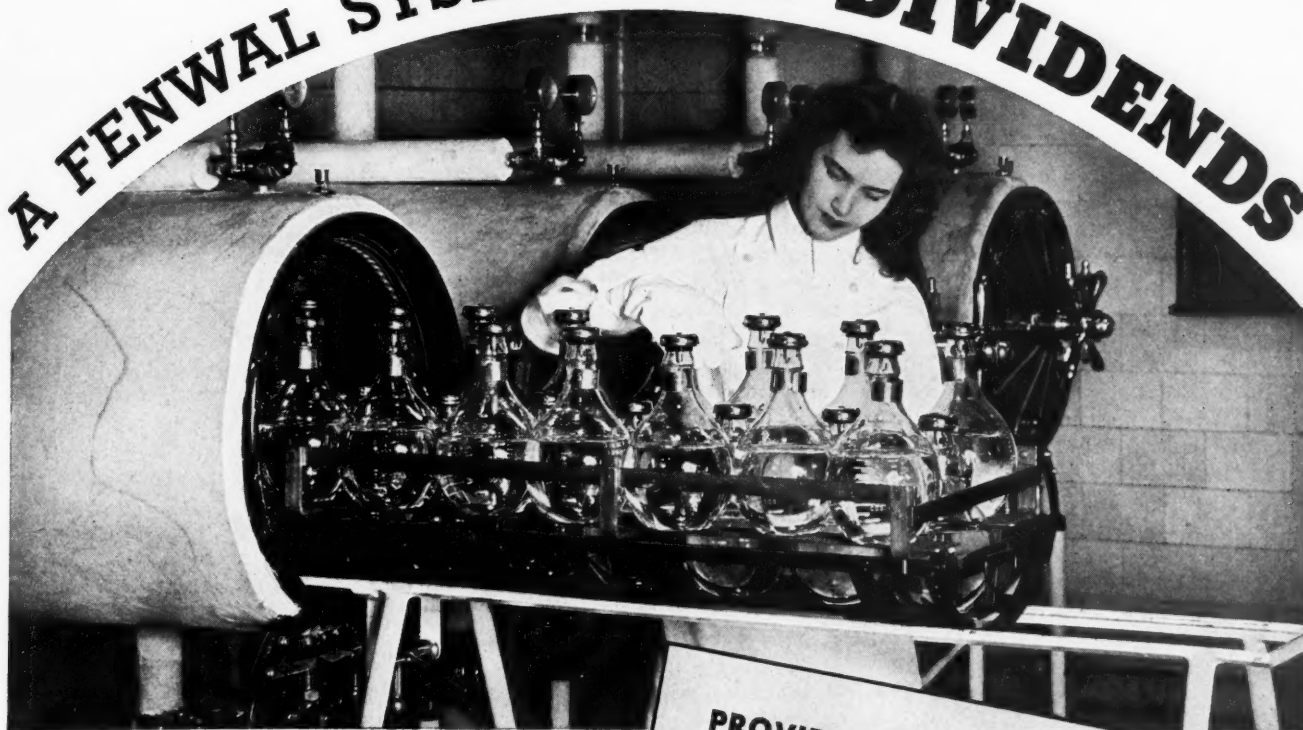
Storage cabinets for dressings, instruments, linens, bedding, clothing, charts, nurses' stations, lockers, splint cabinet, warming cabinet, and many other standard and special uses.

SEE THIS PHOTO ALBUM

Superintendents, administrators, architects, will find many useful ideas in our picture album, containing some fifty photographs of hospital installations. Available to you for examination without obligation. Write us, stating when you would like to see the book.

ST. CHARLES MANUFACTURING CO., ST. CHARLES, ILLINOIS

A FENWAL SYSTEM PAYS DIVIDENDS



IN CONVENIENCE... SECURITY... MONEY SAVED... from the day it enables your hospital to prepare, store and administer SAFE PARENTERAL FLUIDS at an amazingly low per-liter cost.

Within a relatively short period, the Fenwal Technic has been adopted by hundreds of conservative yet alert-to-trend hospitals who recognize in this standardized equipment an immediate means of effecting a drastic economy.

Send for literature describing various capacity Preparation Units and supplementary equipment which insures safety... accuracy... speed.

PROVIDES FOR ADMINISTRATION FROM ORIGINAL CONTAINERS

- Sterile solutions, under perfect vacuum, can be stored indefinitely without impairing their value as safe parenteral fluids.
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- Fenwal Container-dispensers can be reused hundreds of times. For practical purposes, they are available in graduated 1500, 1000, 500, 400 and 250 cc. sizes.
- Reusable TEL-O-SEAL hermetic closures fit containers of all sizes.

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THE SOLUTION DESIRED AT THE INSTANT REQUIRED

Books on Review

SOCIETY AND MEDICAL PROGRESS. By *Bernhard J. Stern*. Princeton University Press, 1941. Pp. 264. \$3.

It is a pleasure for one who believes that a hospital may be fittingly described as a medical institution with a social purpose to review a book by an author who looks upon medical science as a social science.

The range of related subjects treated in "Society and Medical Progress" is revealed by its chapter titles: "The Long Road to Medical Science," "The Scientific Foundations of Medicine," "The Rôle of the Medical Schools," "The Development of the Modern Hospital," "Urbanization and Its Effects," "Income and Health," "The Conquest of Famine," "Medical Advances and Social Progress," "Resistances to Medical Change," "Medical Progress and Social Change."

In his chapter on the development of the hospital, the author includes a significant paragraph:

"The hospital has, in fact, within recent years become the central and strategic factor both in medical care and in medical education, and technical and

scientific developments are making it increasingly so. Training for specialties as well as for general practice is more effectively achieved through the hospital than through the classroom or through individual practice, for the hospital and clinic offer direct and controlled observation of many patients. The interchange of medical knowledge between the specialists and the clarification of the common principles underlying medical theory and practice take place primarily in the hospital and clinic as the center of consultant service. Because it represents funded financial as well as intellectual resources, the hospital has been able better to keep abreast of scientific changes by requisite investment in expensive apparatus. . . ."

In the closing paragraph of the book, Mr. Stern writes:

"... Through an analysis of medicine's changing rôle in society and a study of past resistances to medical progress, perspectives will be gained on contemporary controversies. If this is achieved, in even a small measure, the objectives of this book will have been realized."

In the opinion of the reviewer, his book may do just that. It is worth reading by anyone wishing to clarify his own thinking on the subjects with which it deals.—JOHN E. RANSOM.

FIGHTING FOR LIFE. By *S. Josephine Baker, M.D.* New York: The Macmillan Co., 1940. \$2.75.

In smooth, flowing language, Dr. Josephine Baker tells of her family life, the influence of her parents upon her childhood and how she finally decided to study medicine. She relates in an interesting way the factors that determined her entering the practice of medicine and how she finally became associated with the New York City board of health. She outlines the influence of politics on the health program of the great metropolitan city, why and how she was selected to set up a demonstration unit to reduce infant mortality and the gratifying results of the experiment. She tells of the development of the New York Bureau of Child Hygiene and finally how the U. S. Children's Bureau was established as a result of her work.

"Fighting for Life" is a book everyone who is interested in child welfare should read. It shows the courage of the pioneers in this interesting field and gives a perspective of the work still to be accomplished.—EVA ELLEN JANSON.

☆ New Conveniences for Patients in HILL-ROM Single Pedestal Over Bed Table

NEW, exclusive, and offering many advantages never found in an Over Bed Table before, the Hill-Rom No. 114 operates from the side of the bed, the single pedestal permitting it to be pulled over the bed or pushed aside by the patient. It is crank-operated, the same as other over bed tables, and is built with a wide margin of strength to withstand hardest usage. All standard Hill-Rom features, including vanity and reading rack, are incorporated in a truly fine piece of furniture. Send for literature and prices.

HILL-ROM COMPANY, INC.,
Batesville, Indiana



HILL-ROM FURNITURE

FOR THE MODERN HOSPITAL

NEW! QUICK, EASY WAY TO SHATTERPROOF WINDOWS

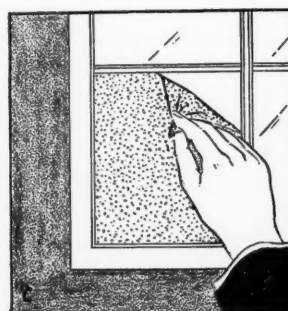
HERE'S ALL YOU HAVE TO DO!



A—Cut cheesecloth to window pane size. Spread ARABOL SHATTERPROOF PASTE over glass.



B—Apply material snugly over each pane. Presto—a shatterproof window!



C—To remove—simply strip off material, wash glass with water. That's all.



D—For blackout protection use black, opaque cloth instead of cheesecloth.

ARABOL SHATTERPROOF PASTE and CHEESECLOTH

Civilian defense authorities stress the danger of splintered, flying glass. Now an improved, easy, inexpensive way has been found to shatterproof windows without cutting off daylight.

Cheesecloth pasted to windows with ARABOL SHATTERPROOF PASTE has been proved by actual explosion tests to give best results.



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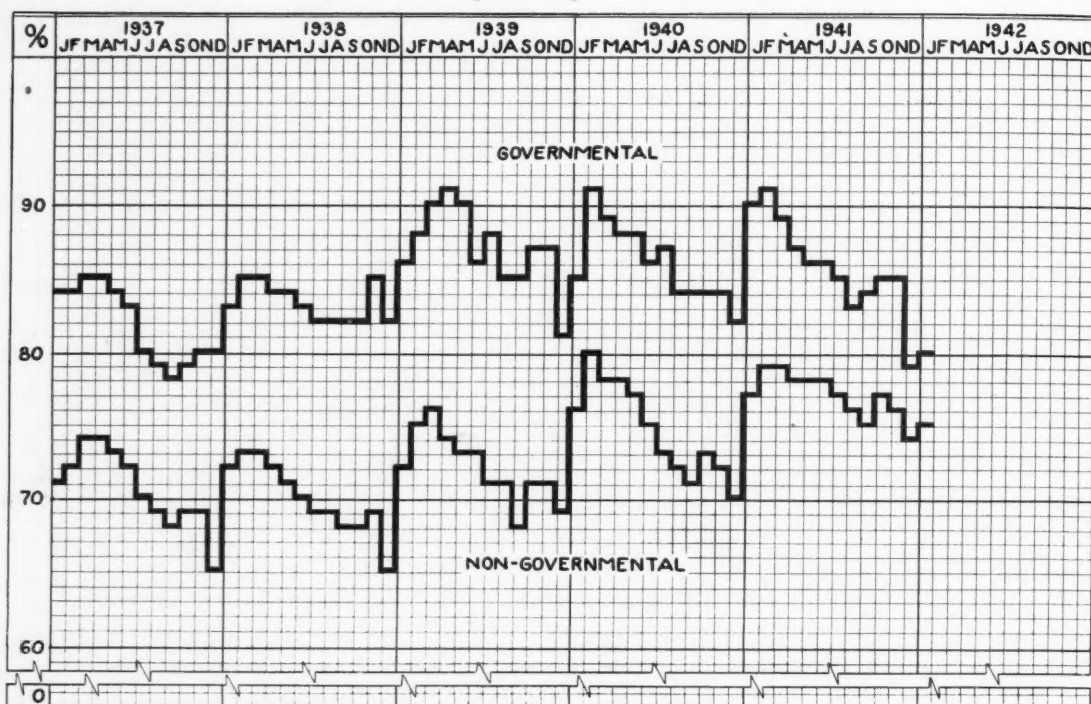
CHICAGO

SAN FRANCISCO

Branches in principal cities

Vol. 58, No. 3, March 1942

January Occupancy Shows Increase



The full effect of the January increase in hospital occupancy was not evident when this issue went to press, because the short month had not permitted receipt of most reports. Probably when

later reports are received, the January figure will jump appreciably and may exceed last year's figures.

Hospital construction projects announced during the period from January

12 to February 9 amounted to \$10,200,000 for 54 projects. The total since January 1 comes to \$14,290,000 as compared with \$22,573,000 for the same period last year.

Wesley wanted the last word in wards

When Wesley Memorial Hospital, Chicago, was only in the blueprint stage, it was determined that ward patients should be given *privacy* . . . that the staff should have *convenience*. So Judd Cubicle Curtain Equipment was specified for generous use. You can modernize your wards with this same patented equipment.

An illustrated brochure, showing Wesley's use of Judd Equipment and telling how you can profit with a Judd installation, is now being prepared. Write today; we'll reserve a free copy in your name.

The heart of Judd Equipment, which lets you transform an open ward into a compact series of private rooms in just a few moments.

JUDD Cubicle Curtain
EQUIPMENT

H. L. JUDD COMPANY, Hospital Division:
87 Chambers St., New York City; Branches: Chicago,
Merchandise Mart; Detroit, 449 E. Jefferson Ave.;
Los Angeles, 726 Washington Blvd.



What's New for Hospitals

MARCH 1942 SUPPLEMENT TO THE MODERN HOSPITAL AND THE HOSPITAL YEARBOOK

Bedside Cabinet and Table

The new Simmons bedside cabinet has a drop leaf attachment which can be raised and locked into position with one hand. Used in wards, it serves as both bedside cabinet and overbed table. Provision is made to raise and lower the table to the desired height. The top height of forty inches above the floor allows free swing over the patient and the table extends twenty-five inches over the bed. This is said to be more than one



half the width of a hospital bed. The drop leaf attachment has a zalmite, stain resistant plastic top.

The bedside cabinet comes in any of twenty color schemes or fifteen wood grain finishes. (Key No. 672)

Simmons Co., Dept. MH, Merchandise Mart, Chicago, Ill.

Hydrated Finishing Lime

USG hydrated finishing lime is a new product prepared to meet government specifications. Because unhydrated magnesia in finishing lime caused plaster to fall, government specifications were set up to overcome this difficulty. The new hydrated lime is especially valuable for patching since a patch job can be handled without delay. The lime does not require soaking but is simply put into the water in the mixing box, given fifteen to twenty minutes to absorb water, and then mixed. It can be used immediately after mixing. It is said to shorten the time required for new building and to simplify job repair wherever plaster is used. (Key No. 706)

U. S. Gypsum Co., Dept. MH, 300 W. Adams St., Chicago, Ill.

THIS supplement presents information on significant hospital products for the use of administrators, department heads and medical personnel. Only items of definite application in hospitals are described.

**THE MODERN HOSPITAL
PUBLISHING CO., INC.**

919 North Michigan, Chicago, Ill.

Fire Retardant Chemicals

Du Pont fire retardant chemicals are said to give complete protection to materials against spread of flame and afterglow. Except for acetate rayon, they are recommended for effective use on all fabrics such as curtains, draperies, sleeping garments, bed linen, blankets, mattresses, paper, and any other item of hospital furnishings or supplies where this type of treatment would be beneficial.

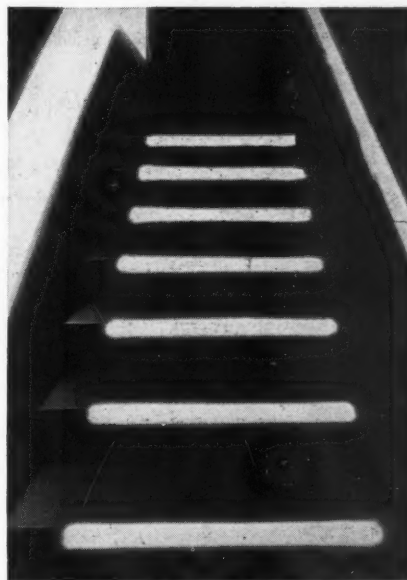
In the materials treated with the fire retardant chemicals the rate of combustion is slowed down or the material is rendered incapable of supporting combustion. The proper application of the fire retardants does not render the material fireproof but will prevent the spread of flames and greatly reduce fire hazards. The treated material, if subjected to flame, would be charred at the point of contact of the flame but no general blaze would result and there would be no afterglow.

The chemicals are water solvent but after each laundering cloth may be rendered flameproof by soaking for a few seconds in a solution made up of one pound of the retardants in one gallon of water, wringing out lightly and drying. Upholstered furniture, mattresses and similar articles may be sprayed with the solution. It is said that common dry cleaning solvents do not remove the fire retardant and the chemical does not show on the material flameproofed, nor is the color affected. (Key No. 715)

E. I. du Pont de Nemours & Co., Inc., Grasselli Chemicals Dept. M.H., Wilmington, Del.

Blackout Lighting

Danger points in blacked-out buildings can now be illuminated without nullifying the desirable effects of the blackout, it is stated by Continental Lithograph Corporation in introducing its new product, "Conti-Glo P-10" phosphorescent sheeting. The new material is described as a flexible "glow-sheet," an emergency



light source that is said to be complete in itself and is sold by the yard. The surface is near white and smooth in finish, backed by closely woven fabric. It can be cut with scissors or knife into any desired shape or symbol.

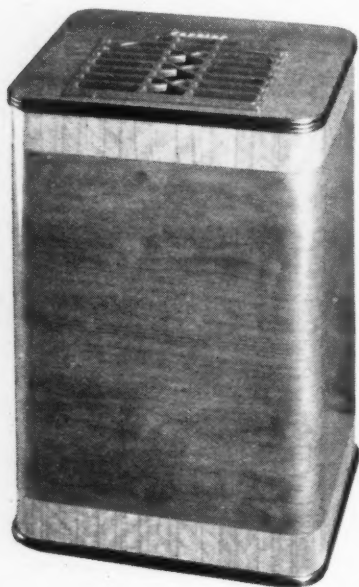
Applied to walls, ceilings, stair treads and hand rails, Conti-Glo is said to provide sufficient illumination so that obstructions and hazards can be seen and avoided. The material can also be worn in the form of arm bands, waist bands and anklets to provide illumination for persons who are out of doors during a blackout.

Conti-Glo is expected to last, with little change in its illuminating properties, for an indefinite period if it is used indoors, the manufacturer states. When used out of doors it is expected that it will last six months or a year. It can be stored without fear of spoilage and there is no danger that it will wear out as a result of many activations, it is claimed. (Key No. 669)

Conti-Glo Division, Continental Lithograph Corp., Dept. MH, 72nd St. at St. Clair Ave., Cleveland, Ohio

Unit Humidifier

The new model Carrier Humidifier has a two speed motor with a two speed switch, making the unit adjustable for different room sizes and also for different weather conditions.



Designed to supplement heating systems which provide inadequate moisture, the unit is compact and attractive in appearance and will blend with most styles of interior decoration. The humidifying effect of the unit is self-regulating and it can be located any place in a room without adjustments. It is said to be quiet in operation and can be moved from one place to another as needed. Operation is obtained by plugging into an electric outlet and filling the water container of the unit by hand. It requires no more current than a fifty watt electric light bulb, according to the manufacturer. (Key No. 681)

Carrier Corp., Dept. MH, Syracuse, N. Y.

Quick Drying Oil Paint

An oil paint especially designed for application to day old plaster or masonry is said to be durable, foolproof and washable. It is available in either interior or exterior mixture and the manufacturer claims that it does not seal in the moisture but permits it to dry naturally while producing a perfect paint coating. Known as Bondlite, this product is said to dry in an hour and to be safe for painting over calcimine or whitewash. (Key No. 696)

Wilbur & Williams Co., Dept. MH, 456 Park Square Bldg., Boston, Mass.

Alternate for Shellac

A timely announcement, in view of the freezing of shellac supplies, comes from O'Brien Varnish Company, which is marketing an "alternate" floor finishing product said to combine the sealing qualities of shellac and the filling properties of paste filler. The new product, called "Adamantean" filler and surfacer, can be applied to any new or resanded floor, it is claimed, and imparts no color. It will serve equally well as a base for gloss varnish, dull varnish or wax finish coat.

The material is said to be easy to apply and need not be wiped off after application. A satisfactory finish can be obtained on oak, maple, pine or edge-grain fir floors with one coat of the Adamantean filler and one coat of either varnish or wax. (Key No. 692)

O'Brien Varnish Co., Dept. MH, 101 N. Johnson St., South Bend, Ind.

Lining Felt

A new improved, semisaturated lining felt made by the floor division of Armstrong Cork Company has unusually high resistance to splitting caused by seasonal sub-floor movements, according to



the manufacturer. It also offers increased resistance to disintegration and bunching when installed over floors subject to severe foot traffic or constant rolling of furniture. It is said to have advantages on both dry and saturated felts and lino-strip and linosets can be cut in wet without pulling away any of the material.

Linoleum paste is said to be saved because it can penetrate only deeply enough to assure a maximum bond since the fibers are partially impregnated with asphalt. Its increased flexibility is said to minimize rolling and it can be cut with an ordinary linoleum knife. Increased resistance to scuffing is combined with strength to hold up under faster handling without tearing. The lining is said to be easily removed when the linoleum is taken up. (Key No. 683)

Armstrong Cork Co., Dept. MH, Lancaster, Pa.

Improved Kimsul Insulation

The Kimsul covered blanket is an improvement over the regular Kimsul blanket insulation in that a tough, flexible, asphalted fiber cover has been especially developed. It is said to have the



necessary toughness to permit stapling to the sides of studs, rafters and joists without the use of wood or fiber cleats or the hazards of tearing loose. This insulation product is compressed into packages for shipment and expanded for installation to five and one half times its compressed surface area. To facilitate accurate precutting while still in compressed form the trade mark "Kimsul Insulation" is printed in white at twenty-four inch intervals on the cover.

This new asphalted fiber covered insulation is available in nine numbers, widths of sixteen, twenty and twenty-four inches and in three thicknesses, one half inch, one inch and two inches. The new method of packaging is said to eliminate the use of solid fiber boxes and the roll is designed for greater compactness and ease of handling. (Key No. 719)

Kimberly-Clark Corp., Dept. MH, Neenah, Wis.

Plastic Wallboard Shapes

Moldings in a variety of colors and shapes, designed to replace metal moldings for use with flexible and rigid wall covering materials such as plywood, linoleum plastic, metal and glass, are offered in Jul-Blum plastic wallboard shapes. Provided to accommodate one eighth inch and five thirty seconds inch materials, the manufacturer states that these moldings offer permanency and durability of color, are readily cleaned and may be maintained by waxing or simonizing. The plastic shapes are adapted for use in bathrooms, laboratories, kitchens and similar rooms since it is said they are not affected by water. (Key No. 606)

Julius Blum & Co., Inc., Dept. MH, 532 W. 22nd St., New York, N. Y.

Vanity Overbed Table

This new adjustable vanity overbed table is said to be practical for use in any hospital room or ward and also for use over a chair. The reading rack and vanity compartment are practical features and it is crank operated for height



adjustment. Available in any of the current Hill-Rom finishes, the table is said to be exceptionally durable and is easily moved to any desired location. (Key No. 720)

Hill-Rom Co., Inc., Dept. MH, Batesville, Ind.

Concentrated Vitamin Food

Foodex is a food concentrate which in each portion (1 small vitamin and mineral cake) is said to supply the seventeen daily nutritional "musts"—nine important vitamins and eight essential minerals together with four rich sources of the natural B complex. It provides an effective means of overcoming multiple diet deficiencies.

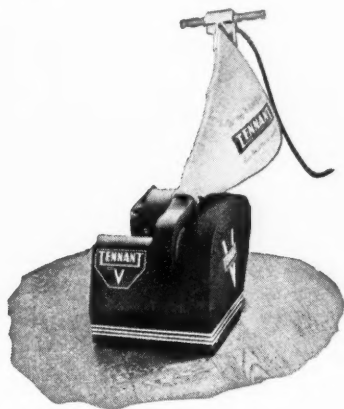
This product is said to require no preparation and each daily supply is protected through individual scientific packaging against oxidation of vitamins or contamination of the product. It can be eaten as it is or may be mixed with water, coffee or milk as a palatable drink. The chocolate flavor has a wide appeal and the product is said to be easily digested.

Scientifically balanced and packaged, Foodex is prepared for three age groups, children-juniors, adults and adults-seniors. Discounts are given on quantity purchases by hospitals for supplying patients as well as staff members. (Key No. 705)

Scientific Nutrition Corp., Dept. MH, Bloomfield, N. J.

Floor Machine

The new Tennant Model V floor machine has a high powered vacuum of new design which is said to operate efficiently in either direction of rotation and with automatic belt tension adjustment. Finger touch regulation of pressure when using the hard wax bar is provided as is simplicity of belt shift to change speeds for sanding and buffing. The adjustable caster permits leveling of the machine



when necessary. The welded steel construction replaces aluminum used on earlier models. (Key No. 684)

G. H. Tennant Co., Dept. MH, 2530 N. Second St., Minneapolis, Minn.

Lightweight Cleaner

The G-E lightweight Master-Vac cleaner is said to be quiet in operation with powerful suction. Ball bearing



swivel casters make moving easy and the swivel handle and thirty pound weight provide ease in carrying. This model is twenty-four inches high and thirteen inches in diameter with new improved cover clamps which permit the cover to be fastened or removed quickly. The all rubber bumper affords protection for furniture and walls. (Key No. 689)

General Electric Co., Dept. MH, Bridgeport, Conn.

Blood Bank Refrigerator

The Jewett blood bank refrigerator is especially designed for safeguarding ample quantities of blood to meet hospital needs. It is not an adaptation of an ordinary refrigerator but has been designed especially for this use.



The revolving shelves are easily turned to bring the desired Vac to the front quickly and without disturbing any others. The shelves are adjustable to any height to accommodate Vacs of all sizes and shapes. Positive circulation of cold air uniformly throughout the cabinet is assured through the forced draft unit cooler. The circular shape eliminates dead air pockets. The adjustable temperature control is set for 38° F. and is automatically maintained to within two degrees.

The refrigerator may be connected to a remote compressor or is available with self-contained General Electric twin cylinder unit ready to plug in. Requiring a minimum of floor space, the two models are thirty-seven inches and thirty-three inches in diameter, respectively. (Key No. 663)

Jewett Refrigerator Co., Inc., Dept. MH, 220 Letchworth St., Buffalo, N. Y.

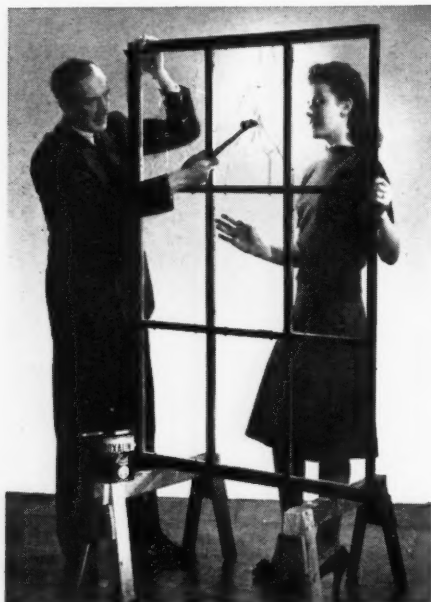
Plastic Tipped Pencils

Plastic ferrules have been developed to replace brass on Templar Durollead pencils. Because of the chemical reaction of ordinary plastics to pencil lacquer, the material is made by a special formula, the manufacturer states. (Key No. 694)

Reliance Pencil Corp., Dept. MH, Mount Vernon, N. Y.

Protective Film for Glass

A new liquid coating known as Roxaneal, for protection against flying glass in case of bombing or other explosion, has recently been announced. It is not claimed to stop glass from fracturing but the manufacturer states that tests have proved that it will keep broken glass in place, thus preventing the flying of dangerous glass splinters.



A clear, transparent, water white liquid, Roxaneal does not obstruct vision or light and is also available in blackout type, according to the manufacturer. Brushed on the interior of clean glass, windows may be washed with mild soap solution without affecting the strength of the protective film. After the emergency Roxaneal may be removed by peeling it off with a razor blade or by washing it off with solvents.

The product is suggested for use on both interior and exterior glass and for glass doors. In addition to protection against flying glass, Roxaneal holds the glass in place and thus keeps its protective value against weather conditions. (Key No. 666)

Roxalin Flexible Finishes, Inc., Dept. MH, Elizabeth, N. J.

Anesthesia Outfit

A new anesthesia outfit has recently been announced by Becton, Dickinson & Co. It is said to simplify and safeguard the administration of intravenous anesthetics. A 20 c.c. syringe with automatic valve attached delivers the anesthetic solution through the side arm of the mixing adapter directly to the hub of the needle in the patient's vein. The anes-

thetic is injected into the flowing stream of saline and carried immediately into the vein. The syringe may be taped in place and only touched to administer more anesthetic. An automatic valve prevents the possibility of back flow and eliminates the chance of air entering the system should it be necessary to refill the syringe. (Key No. 707)

Becton, Dickinson & Co., Dept. MH, Rutherford, N. J.

Latex Invalid Cushions

Two latex sponge rubber cushions have been especially designed to add to the comfort of convalescent patients. The Invalid-Eze ring illustrated at the top is molded from latex milled sponge and designed for maximum distribution of air and perfect ventilation. The softness and resiliency resulting from the design are said to provide comfort no matter what position the patient may take.



The Chair-Eze cushion shown in lower illustration is scientifically designed for wheel chairs or similar uses. Also of milled latex sponge, it gives relaxed comfort in any position and the hole in the center is said to relieve pressure on the coccyx.

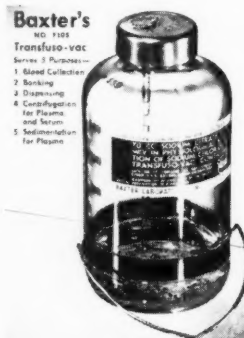
Each of these cushions is two inches thick, is said to retain its shape indefinitely, and has removable, washable covers. (Key No. 670)

Guardian Latex Products, Inc., Dept. MH, 2861 W. Avenue 35, Los Angeles, Calif.

Five Purpose Transfusion Service

The new Baxter Transfuso-Vac is a five purpose vacuum container which provides a completely closed technic for (1) drawing blood, (2) banking whole

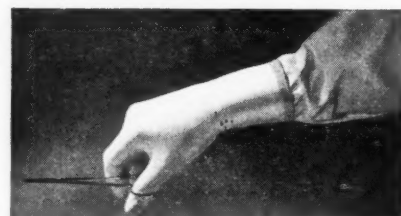
blood, (3) dispensing blood, (4) centrifugation, in preparation of plasma and serum and (5) sedimentation, in preparation of plasma. Because of the absence of complicated attachments and special routines it is said that one person can easily handle any one of these technics without assistance. The completely closed system makes any special precautions against contamination unnecessary. The Transfuso-Vac contains 70 c.c. of anti-



coagulant and an air tube, and holds 500 c.c. of blood. A suspension band and bale are attached for dispensing.

The wide range of uses for this new container makes it possible for the hospital to cut transfusion service equipment inventory substantially, as this new Transfuso-Vac is said to eliminate the necessity of carrying a stock of separate containers for transfusions, banking, centrifuging and sedimentation. (Key No. 721)

American Hospital Supply Corp., Dept. MH, Merchandise Mart, Chicago, Ill.



Neoprene Surgical Gloves

Surgical gloves made from neoprene, a du Pont synthetic, are said to provide relief from skin rashes on the hands of surgeons who cannot wear rubber gloves comfortably. Exhaustive tests are said to have indicated that surgeons who are allergic to latex rubber gloves do not have skin irritation with neoprene. In addition this synthetic is said to resist the harmful effects of oils, petrolatums, fats, disinfectants and similar materials which damage gloves of natural rubber. (Key No. 674)

Pioneer Rubber Co., Dept. MH, Willard, Ohio

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Cane Glider

The Everest & Jennings cane glider is designed for patients who must learn to walk again or who need support in walking. It is said to be especially desirable in transferring from crutch to regular cane and helps the patient overcome any feeling of insecurity because of its four point support. The manufacturer states that it never needs to be lifted except on



steps and that it grips the ground securely under weight.

Weighing only two and one half pounds the glider is strong enough to support two hundred pounds of weight and is adjustable as to height. It may be used singly, in pairs or with one crutch. In pairs they may be swung between like crutches or used to walk step by step. (Key No. 671)

Everest & Jennings, Dept. MH, 1032 N. Ogden Drive, Los Angeles, Calif.



Insultoic Membrane

Insultoic Membrane is a chromicized, absorbable, insulating sheet for use over denuded structures to prevent the formation of adhesions. It has been used successfully, according to the manufacturer, in arthroplasties, neurosurgery, tendon and nerve repair and fallopian tube reconstruction.

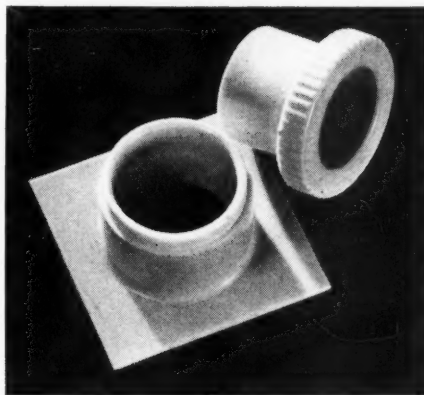
The product is supplied in sterilized tubes, ready for use, in various sizes and thicknesses. (Key No. 665)

Lewis Mfg. Co.—Bauer & Black, Dept. MH, 2600 S. Dearborn St., Chicago, Ill.

Surgical Cast Window

The Plaskon surgical cast window is designed for use in cases of compound fracture where the leg or arm must be put in a cast and left to heal. Structurally it is similar to the socket used to hold the uprights of a pipe railing. The base is flat and three inches square. In the center is a hollow cylinder one inch and a quarter in height and one inch and a half in diameter integrally molded with the base. Telescoping into the cylinder is a cup, the bottom of which acts as a seal against penetration of air to the wound through the cylinder. The cup is held in place by its lip which fits over a groove at the top of the cylinder. Adhesive tape is applied as an added precaution. The plaster cast is poured around the base of the window.

When the compound fracture is set, the open wound treated with sulfathiazole and then wrapped in a plaster cast the surgeon may make an inspection or take a culture by removing the cup.



Plastic was used for the window since it is chemically inert and will not influence the normal progress of the wound and can be sterilized. It will not conduct either heat or cold and there is no chance of breakage. (Key No. 664)

Cochrane Physicians Supplies, Inc., Dept. MH, 133 E. 58th St., New York, N. Y.

Personalized China

A new process for personalizing china has been developed by the Iroquois China Co. Table ware with your own design, color scheme, crest or hospital name can now be made up at no extra cost for engraving, art work, dies or application of the design. The only requirement is an initial order of at least 250 dozens of ware. (Key No. 711)

Iroquois China Co., Dept. MH, Syracuse, N. Y.

New Fabric Design

One of the new designs in Goodall Decorative Fabrics just released is known as Keswick, a distinctive, colorful pattern with long curved tulip like leaves enclosing massed floral bouquets. This fabric is suitable for most decorative needs—draperies, upholsteries, slip covers, spreads and screens—and is said to shed dust and resist crush and wrinkle



because of the yarns used. The manufacturer states that the fabrics are inexpensive and long wearing and are not dulled by sun or tub. (Key No. 716)

Goodall Worsted Co., Dept. MH, 61 E. 53rd St., New York, N. Y.

New Type Cleanser

Marvarok is described as a new cleanser for washing dishes, glassware, silverware, utensils and other items. It is also said to be effective for cleaning tarnished silverware, stained coffee and tea urns, laboratory glassware, meat blocks, tables, refrigerators, kitchen equipment, floors, walls and windows. Provided in the form of a hard white odorless briquet, Marvarok dissolves easily and uniformly in hard or soft water yet cleansing strength of the water is always the same.

There are two types of this product, No. 7 (nonsudsing) for machine washing of dishes, glassware, silverware and utensils, and No. 11 (sudsing) for hand washing and other procedures requiring suds. If used with the Marvarok feeder the same cleaning strength is said to be automatically maintained at all times. (Key No. 648)

Antiseptol Co., Inc., Dept. MH, 5524 N. W. Highway, Chicago, Ill.

Pharmaceutical

Amino Acids, Stearns

Amino Acids, Stearns, may be administered orally, subcutaneously, intramuscularly and intravenously. It is said to be chemically standardized so that a constant product is assured. The administration of this product is particularly advantageous when given preoperatively and postoperatively to provide adequate protein to protect the liver from hepatotoxic effects of anesthetics and reduce the postoperative loss of nitrogen. It is also of value as a substitute for protein feeding in maintaining a positive nitrogen balance and in the correction of hypoproteinemias found in chronic illnesses, such as nephritis, carcinoma, colitis, hyperthyroidism, hepatic insufficiencies, inanition and certain types of anemia. The product is supplied in bottles containing 100 cc. of sterile 15 per cent solution of Amino Acids. (Key No. 649)

Frederick Stearns & Co., Dept. MH,
6533 E. Jefferson, Detroit, Mich.

Trichinella Extract, Diagnostic

For skin testing those suspected of having trichinosis, for use in routine testing of persons with undiagnosed febrile disturbances and as a tool for epidemiological survey to determine the incidence of trichinae infection, Trichinella Extract, Diagnostic, is now offered by Parke, Davis & Company.

Prepared by extracting dried and powdered larvae of *Trichinella spiralis* with normal (physiologic) salt solution, the final product represents a dilution of approximately 1:8000, with 0.3 per cent phenol added as a preservative. It is supplied in 1 cc. vials in a package containing one vial of diagnostic agent and one vial of diluent of control tests. (Key No. 620)

Parke, Davis & Co., Dept. MH, Detroit, Mich.

Betaxin, Winthrop

A synthetic crystalline vitamin B₁ hydrochloride, Betaxin is recommended for cases of B₁ deficiency. In early cases oral administration is considered sufficient but when the deficiency is more pronounced it may be advisable to administer Betaxin parenterally (subcutaneously, intramuscularly and even intravenously).

Administration of this product is said

to relieve the symptoms of B₁ deficiency, improve cardiac function and restore muscular power and reflexes. Also, a rapid return of appetite is usual. The product is supplied in tablet and syrup form as well as for parenteral administration. Each 1 mg. of Betaxin is reported as equivalent to 33 international units of vitamin B₁. (Key No. 638)

Winthrop Chemical Co., Dept. MH, 170
Varick St., New York, N. Y.

Bejectal

A preparation suitable for parenteral injection, each cc. of Bejectal contains 3 mg. Thiamine Hydrochloride, 0.33 mg. Riboflavin, 10.0 mg. Nicotinamide, 1.0 mg. Pyridoxine Hydrochloride with 0.5 per cent Chlorbutanol added as a preservative. The sterile solution is made isotonic with sodium chloride. Where oral administration of the various factors contained in the solution is impossible or inefficacious because of illness or other factors interfering with proper absorption from the intestine, Bejectal is recommended.

Dosage will vary with the severity of the condition treated. In moderately severe cases of hyperemesis, postoperative continuous aspiration, alcoholism and pellagra, ten cc. daily may be administered. One or more cc. daily may be sufficient in milder cases of chronic poor intestinal absorption. If symptoms indicate a deficiency of one specific factor, this should be supplied in addition to Bejectal. The product is supplied in 10 cc. rubber stoppered vials. (Key No. 628)

Abbott Laboratories, Dept. MH, North
Chicago, Ill.

Synapoidin

A new endocrine preparation indicated in pathologic conditions attributable to deficiency of pituitary gonadotropins is offered by Parke, Davis & Company under the name "Synapoidin." It is a combination of chorionic gonadotropin (luteinizing hormone) from human pregnancy urine and the follicle stimulating hormone (gonadal synergist) from the anterior pituitary. It is supplied in 10 cc. rubber-diaphragm-capped vials and each cc. of solution contains 15 synergy rat units. (Key No. 627)

Parke, Davis & Co., Dept. MH, Detroit, Mich.

RECENT CATALOGS AND BOOKLETS

- The National Terrazzo and Mosaic Association, 1420 New York Ave. N.W., Washington, D. C., has prepared an interesting and practical portfolio known as the **Informational Kit**, containing a number of bulletins on terrazzo. Of particular interest is the bulletin entitled "Reducing Explosion Hazards in Hospital Operating Rooms." Other subjects covered include Technical Data and Specifications for Terrazzo and Mosaic Work, Terrazzo Maintenance, Terrazzo Resiliency Tests and Divider Strip Location and Data. The association announces that none of the materials in terrazzo is subject to priorities except the metal strips but through the development and manufacture of plastic strips to take the place of the metal this problem has been overcome. However, it is said that the metal grilles for hospital operating rooms are obtainable under preference rating. (Key No. 677)

- The 1942 Catalog of Glasco Products Co., 111 N. Canal St., Chicago, Ill., lists 757 individual classifications of merchandise, including Kimble laboratory glassware and Vitax surgical glassware. This 229 page book is a comprehensive catalog which describes and illustrates the complete line of laboratory and surgical glassware in an attractive and practical manner. (Key No. 679)

- The new edition of "A Guide to Good Food," issued by General Food Sales Co., Inc., 250 Park Ave., New York, N. Y., was designed to give a complete picture and description of all of the General Foods products packed for institutional use. This full color leaflet illustrates the complete line of institutional size packages with a brief description of each product. The last page describes the quantity recipe service of this company. (Key No. 714)

- The use of the Clinitest tablet method for urine sugar analysis is illustrated and described in a pamphlet issued by Effer-Rescent Products, Inc., Elkhart, Ind. Entitled "A New One-Minute Tablet Test for Sugar in the Urine," the pamphlet describes the steps to be taken in the use of this unit. (Key No. 700)

- An attractive booklet entitled "Good Food for Pleased Guests" has recently been issued by John Sexton & Co., P. O. Box JS, Chicago, Ill. Bright color plates illustrate the products of this company and there are interesting photographs of many institutions using Edelweiss foods, including a number of hospitals. (Key No. 675)

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• "Norton Floors," an eight page descriptive booklet, has recently been published by Norton Co., Worcester, Mass. Suggested uses for Alundum Aggregate for terrazzo floors, Alundum Aggregate for cement floors, Alundum ceramic mosaic tile and Alundum stair and floor tile with descriptive material and illustrations are given. The booklet emphasizes that Norton floors are permanently nonslip and wear resistant and are for interior or exterior application. (Key No. 641)

• A quantity recipe card for a Cape Cod Sandwich is the latest release from the "Cuisine Service" of Kraft Cheese Co., 500 Peshtigo Court, Chicago, Ill. A series of quantity recipe cards that are of interest to hospital dietitians, these recipes include main dishes, salads, sandwiches and desserts and a new recipe is added to the file each month. (Key No. 688)

• "Nutritional Value of Canned Hawaiian Pineapple Juice" is the title of a leaflet recently published by the Dole Hawaiian Pineapple Co., Ltd., 215 Market St., San Francisco, Calif. A discussion of vitamin requirements is followed by a table giving mineral and vitamin needs of men, women and children broken down into classification of activity, with the quantities of these properties contained in each six ounces of pineapple juice. Also included are the biological assay for vitamins, mineral analysis and proximate analysis of this fruit juice. (Key No. 652)

• An attractive eight page catalog has recently been issued by the General Electric X-Ray Corp., 2012 Jackson Blvd., Chicago, Ill., on the "G-E Rotating Anode Tube." This publication explains the principle behind the rotating anode tube and then illustrates and describes the changes made in the new and improved rotating anode tube CRT 1-2. (Key No. 630)

• An informative and helpful folder on "Hospital Signal Systems" has recently been issued by Holtzer-Cabot Electric Co., 125 Amory St., Boston, Mass. It deals specifically with modernization and maintenance equipment for nurses' call, staff register and visual paging systems. Hospital signal system equipment is illustrated and described and a price list sheet and return form are enclosed in the folder. (Key No. 713)

• A pamphlet illustrating and describing the various models of "Take-About Sanders" (sanding machines for floor and furniture) has been issued by Porter-Cable Machine Co., Syracuse, N. Y. Various uses for these machines are described and full specifications are included. (Key No. 699)

(Continued on page 172)

TO HELP YOU get information quickly on new products we have provided the convenient form below. Just check the items of interest to you, fold as indicated and mail—
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Send Me further information on the following items I have checked.

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| <input type="checkbox"/> 607 Hope's Lok'd Bar Steel Sash | <input type="checkbox"/> 678 "Your Table Linens" |
| <input type="checkbox"/> 620 Trichinella Extract | <input type="checkbox"/> 679 Glasco Catalog |
| <input type="checkbox"/> 622 "Hypo-Chlorination of Water" | <input type="checkbox"/> 681 Unit Humidifier |
| <input type="checkbox"/> 627 Synapoidin | <input type="checkbox"/> 683 Lining Felt |
| <input type="checkbox"/> 628 Bejectal | <input type="checkbox"/> 684 Floor Machine |
| <input type="checkbox"/> 630 "G-E Rotating Anode Tube" | <input type="checkbox"/> 686 "Elkay Stainless Steel" |
| <input type="checkbox"/> 638 Betaxin, Winthrop | <input type="checkbox"/> 688 "Cuisine Service" |
| <input type="checkbox"/> 641 "Norton Floors" | <input type="checkbox"/> 689 Lightweight Cleaner |
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| <input type="checkbox"/> 643 "Puritan Gas Therapy" | <input type="checkbox"/> 694 Plastic Tipped Pencils |
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| <input type="checkbox"/> 666 Protective Film for Glass | <input type="checkbox"/> 711 Personalized China |
| <input type="checkbox"/> 669 Blackout Lighting | <input type="checkbox"/> 713 "Hospital Signal Systems" |
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| <input type="checkbox"/> 671 Cane Glider | <input type="checkbox"/> 715 Fire Retardant Chemicals |
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| <input type="checkbox"/> 674 Neoprene Surgical Gloves | <input type="checkbox"/> 719 Improved Kimsul Insulation |
| <input type="checkbox"/> 675 "Good Food for Pleased Guests" | <input type="checkbox"/> 720 Vanity Overbed Table |
| <input type="checkbox"/> 676 "Spring Air Mattresses" | <input type="checkbox"/> 721 Five Purpose Transfusion Service |

I would also like to have information on the following products

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TITLE

HOSPITAL

STREET

CITY

STATE

Tear off on perforated line

Fold down on this line

Fold up on this line and seal

• An attractive twenty-four page catalog on **"Hope's Lok'd Bar Steel Sash,"** issued by Hope's Windows, Inc., Jamestown, N. Y., gives complete technical specifications and structural information on this construction item. The design and strength of this new type of steel window are described and its advantages in improved ventilation and ease of operation are discussed. (Key No. 607)

• The fifth edition of **"Hypo-Chlorination of Water"** has been issued by Mathieson Alkali Works, Inc., 60 E. 42nd St., New York, N. Y. A complete

and comprehensive book covering all phases of the subject, it contains 75 pages of text and illustrations. (Key No. 622)

• The Armstrong Cork Co., Lancaster, Pa., has issued a folder on **"How to Modernize Your Floors,"** with illustrations showing installations in various types of construction, including hospitals and nurses' homes. Emphasis is placed on the beauty, wearability and quiet of these floors and individual designs for various types of installations are suggested. (Key No. 653)

• The Spring-Air Co., Holland, Mich., has just released an attractive two color folder, **"Spring Air Mattresses,"** which illustrates and describes the three types of mattresses made to order by this company for hospitals. Interesting information on the construction of the Karr spring and of these mattresses is given in the leaflet. The Spring-Air table pad and box spring for nurses' homes are also illustrated and described. (Key No. 676)

• The new catalog of **"Englander Properest Products"** has recently been issued by the Englander Co., Inc., Johnson and Stewart Aves., Brooklyn, N. Y. Fully indexed, this 60 page book illustrates and describes hospital beds, bassinets, casters, cots, cribs, mattresses, springs and bed-side and overbed tables. Full specifications are given and included is a list of hospitals and institutions now using this equipment. (Key No. 702)

• An interesting and helpful booklet has recently been issued by Rosemary, Inc., 40 Worth St., New York, N. Y., entitled **"Getting the Most Out of Your Table Linens."** Valuable suggestions are given for the care of table linen. The subjects covered include "Two Distinct Types of Soil," "Basic Washing Formula," "Cotton Takes Washing Best," "Tensile Strength Important," "Cotton Cloths Lint Less," "Most Stains Removable" and "Keep Cloths Off Cement." (Key No. 678)

• **"Puritan Gas Therapy Equipment"** is the title of Catalog No. 29 recently issued by Puritan Compressed Gas Corp., 2012 Grand Ave., Kansas City, Mo. This eight page publication describes the Puritan mask and bag, portable equipment, pressure control regulators, unit accessories and the rental and repair services offered by this company. Prices are included and the catalog is well illustrated. (Key No. 643)

• A catalog of **"Elkay Stainless Steel Products"** for institutions, bound for loose-leaf filing, has been issued by Elkay Manufacturing Co., 4704 Arthington St., Chicago, Ill. Specifications are given for these Elkay Sturdibilt stainless steel cabinet sinks and tops, kitchen sinks, pantry sinks, tops for operating and autopsy tables, portable instrument tables, under-water therapy tanks, mixing tanks for nursery baths, sinks and tops for laboratories and other hospital equipment. (Key No. 686)

• An eight page booklet describing and illustrating the **Sun-Kraft Quartz Ultra-violet Generator and Orifice Applicator** has been issued by Sun-Kraft Inc., 215 W. Superior St., Chicago, Ill. The booklet lists prices of the equipment and special uses. (Key No. 642)

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